Smoke Free Zone

Draft article for The Modernist. NB this version contained more illustrations than the published version.

Healthier modern cities – cleaning the air

Smoke control in post-war Manchester

Martin Dodge

Black smoke billowing out of factory chimneys was regarded by many as a sign of economic success for cities in the north of England. Huge quantities of bituminous coal were burnt in the steam boilers that powered the machinery that made fortunes for the mills owners across the textile region. Manchester in particular greeted visitors with the 'incense of industry'.[1]

Through the nineteenth century massive volumes of sooty particulates and sulphurous smoke fell upon on homes and commercial buildings, and it turned the Pennine hills facing the prevailing wind black and barren. The dirty, polluted air was also inhaled daily by inhabitants and contributed to high levels of respiratory diseases in Manchester and other towns. When smoke combined with fog, the resulting smogs significantly reduced the sunlight reaching urban residents and this was causal factor in the incidence of rickets and contributed low life expectancy in industrial cities.

> *'It is no exaggeration to say that many millions of inhabitants of the north of England have never seen real sunlight in their places of residence except in the event of a bank holiday or of a coal strike, and most of them have become so inured to this deprivation that they are profoundly sceptical as to any possible remedy.'*[2]

Significant pressure by health reformers from the second half of the nineteenth century lead better sanitation and to reductions in water-borne pollution, but attempts by campaigners, such as the Manchester and Salford Noxious Vapours Abatement Association (NVAA), to

[1] * Stephen Mosley, *The Chimney of the World: A History of Smoke Pollution in Victorian and Edwardian Manchester* (Routledge, 2013).

[2] Lord Newton, Chairman of the Departmental Committee on Smoke Abatement, quoted in Ernest D. Simon, Marion Fitzgerald, *The Smokeless City* (Longmans, Green and Co., 1922). https://archive.org/details/smokelesscitysim00simorich

highlight the dangers of smoke and seek to limit emissions were dismissed as unrealistic or simply unnecessary.

Days of dense smog lying across Manchester were common throughout the early decades of the twentieth century. The French impressionist Adolphe Valette captured this murky daytime atmosphere in city well in his Edwardian era paintings. <<1. PAINTING>> Moreover, residential expansion in Manchester through the interwar decades contributed as much to air pollution and smogs days as did the big chimneys of the mills and factories. Many tens of thousands of ordinary homes across the city were consuming daily bucketful's of coal on open fires, in stoves and kitchen ranges. Domestic smoke pollution was also more problematic, compared to that from factory chimneys, at it came from so many sources and these were low to the ground.

Given that Manchester was so notorious for its air pollution it was perhaps not a surprise that local campaigners and civic leader in the council also took the lead in finding solutions in the 1930s. The National Smoke Abatement Society had its headquarters in Manchester during this period. The major innovation was to set up 'smoke control zones' that required householders and property owners to convert their heating and cooking equipment to use cleaner fuels. However, despite the development of many electrical domestic appliances and the possibilities of central heating, at the start of the 1950s some 40 million tons of coal were being consumed domestically in Britain for space heating and cooking.

The first 'smokeless zone' in Britain was affirmed legally in the Manchester Corporation Act of 1946 but did not come into force on the ground until 1952. It covered 104 acres of the city centre; about 1,100 premises had to comply. The size of the zone was extended incrementally over the next couple of years. << 2. MAP>> In the winter of 1952 there was a dramatic and long-lasting smog incident that afflicted much of London and contributed directly to deaths of over 4,000 people. It spurred the government to action and report of the official enquiry noted that it would cost less to legislate for clean air than let pollution continue and have to deal with collateral financial costs. The most significant principle of the Beaver Report was that clean air should be seen as essential to human health as clean drinking water. The report recommended that concrete policies should be developed to reduce smoke levels by 80% in fifteen years for populated areas of the country. In response

the 1956 Clean Air Act was passed and it gave powers to achieve this, most particularly in section 11:

> *(1) Any local authority may, by order confirmed by the Minister, declare the whole of the district of the local authority or any part thereof to be a smoke control area.*
> *(2) Subject to any exemptions and limitations for the time being in force under this section, if, on any day, smoke is emitted from a chimney of any building within a smoke control area, the occupier of that building shall be guilty of an offence*[3]

Following the passage of the Clean Air Act, Manchester council and the neighbouring authorities took action on major polluters and sought to ban smoke emissions across large areas. It was still laborious and time consuming to define smoke control areas, notify occupants, mitigate local opposition and enforce compliance. Much of greater Manchester area was covered by smokeless zones by mid 1970s, some fifteen years after the Clean Air Act. The process was not quite complete for Manchester by this point - the two missing patches evident on the map are Trafford Park and corridor along Ashton Old Road, both were still major industrial areas. <<3 MAP>>

The efforts in enforcing smoke control were worth it, with very evident reductions in level of smoke pollution in Manchester (see graph below) and to a lesser extent a decline in sulphur dioxide emissions. <<4 GRAPH>> Improving air quality was also helped by the phasing out of steam trains by British Rail by 1968 and also structural economic changes that saw the closures of heavy industry and 'cleaner' manufacturing systems being developed. In the domestic sphere there was finally a shift away from coal fires as part of broader post-war consumer affluence and into the 1970s the arrival of cheap natural gas from North Sea resulted in wholesale sift to central heating. << 5 GAS ADVERT >>

The dirty and dismal character of the built environment that afflicted Northern industrial cities like Manchester, caused in large part by air pollution, was also markedly changed by programmes from the late 1960s onwards to clean the outside of public buildings of the layers of soot. The resulting transformation of familiar landmarks, like Manchester Town Hall, that had for living memory been stained inky black could be dramatic. It arguably

[3] http://www.legislation.gov.uk/ukpga/1956/52/pdfs/ukpga_19560052_en.pdf

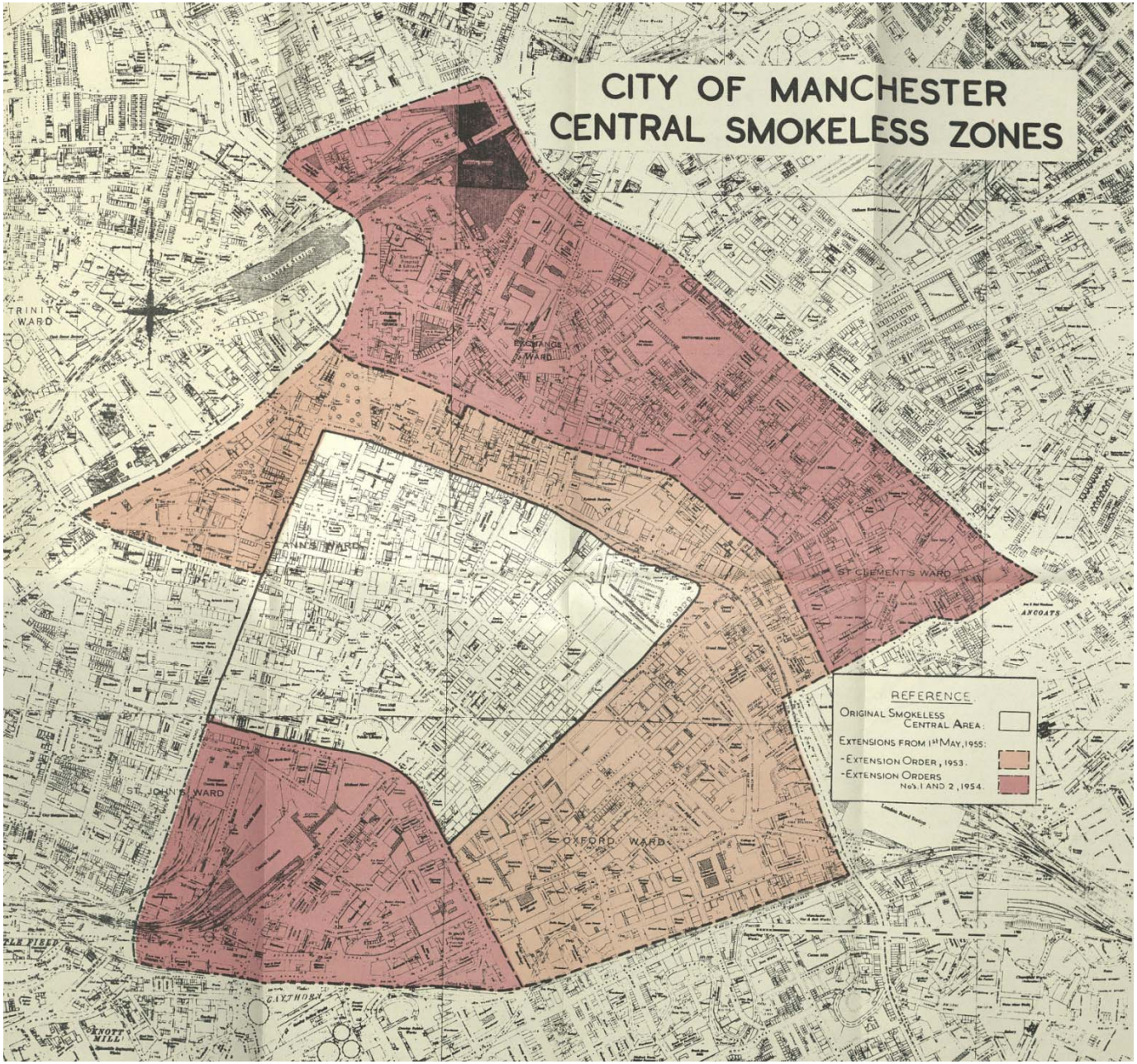
contributed to the conservation of Victorian buildings as people could more readily appreciate their architectural merit. << 6 TOWN HALL PHOTO >>

Dramatic improvements in pollution level were achieved by sustained local government action in the post-war decades and today it is evident that the skies are visibly clear of smoke. However, the scourge of air pollution and its impacts on human health had not been solved. The most pressing concern in recent years has been the toxic emissions caused by the volumes of vehicle traffic in Greater Manchester. This is exacerbated by heavily congested roads and motorways in the region. Diesel cars, buses and HGVs are the worst polluters and there are high concentration CO_2 and NOx along commuting corridors, around major junctions and besides the motorways in Manchester. Recent concern has focused on the health risks of invisible particulate matter (PM10s) that for residents living near the busiest roads regularly exceeds legally permitted safety levels. << 7 MAP >>

1. PAINTING

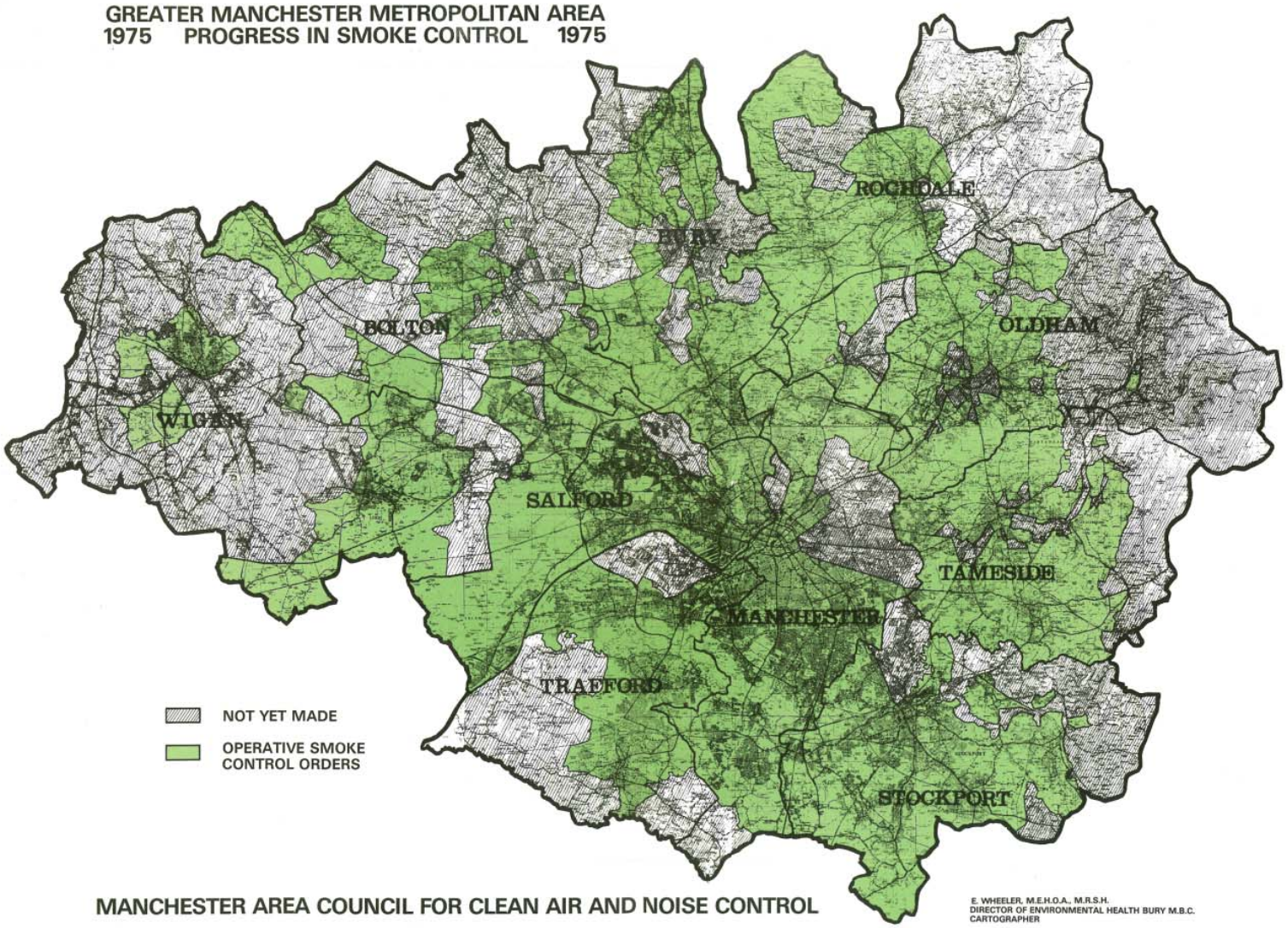
York Street leading to Charles Street, Manchester 1913. Adolphe Valette. [Medium oil on linen, 81.3 x 60 cm.] Courtesy of Manchester Art Gallery.

2. MAP



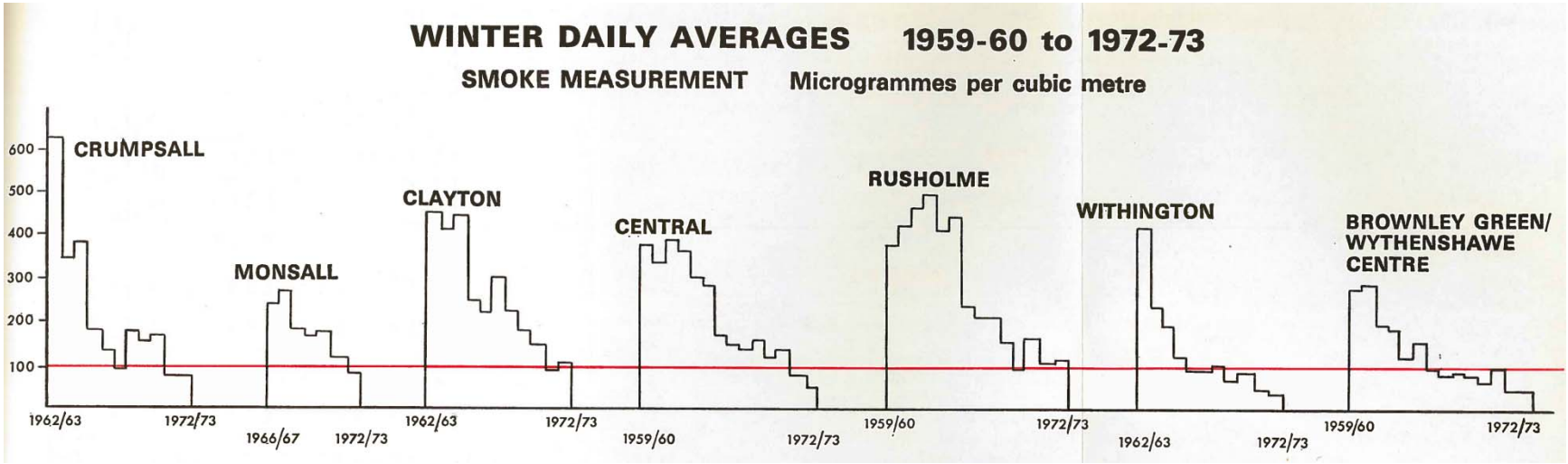
Source: Manchester Medical Officer of Health Report, 1954. Courtesy of Manchester City Libraries and Archives.

3. MAP



Source: Twenty Years Review of Air Pollution Control in the Area of the Council (Manchester Area Council for Clean Air and Noise Control, 1975). Courtesy of Manchester City Libraries and Archives.

4. GRAPH



Source: Manchester Medical Officer of Health Report, 1974.
Courtesy of Manchester City Libraries and Archives.

5. ADVERT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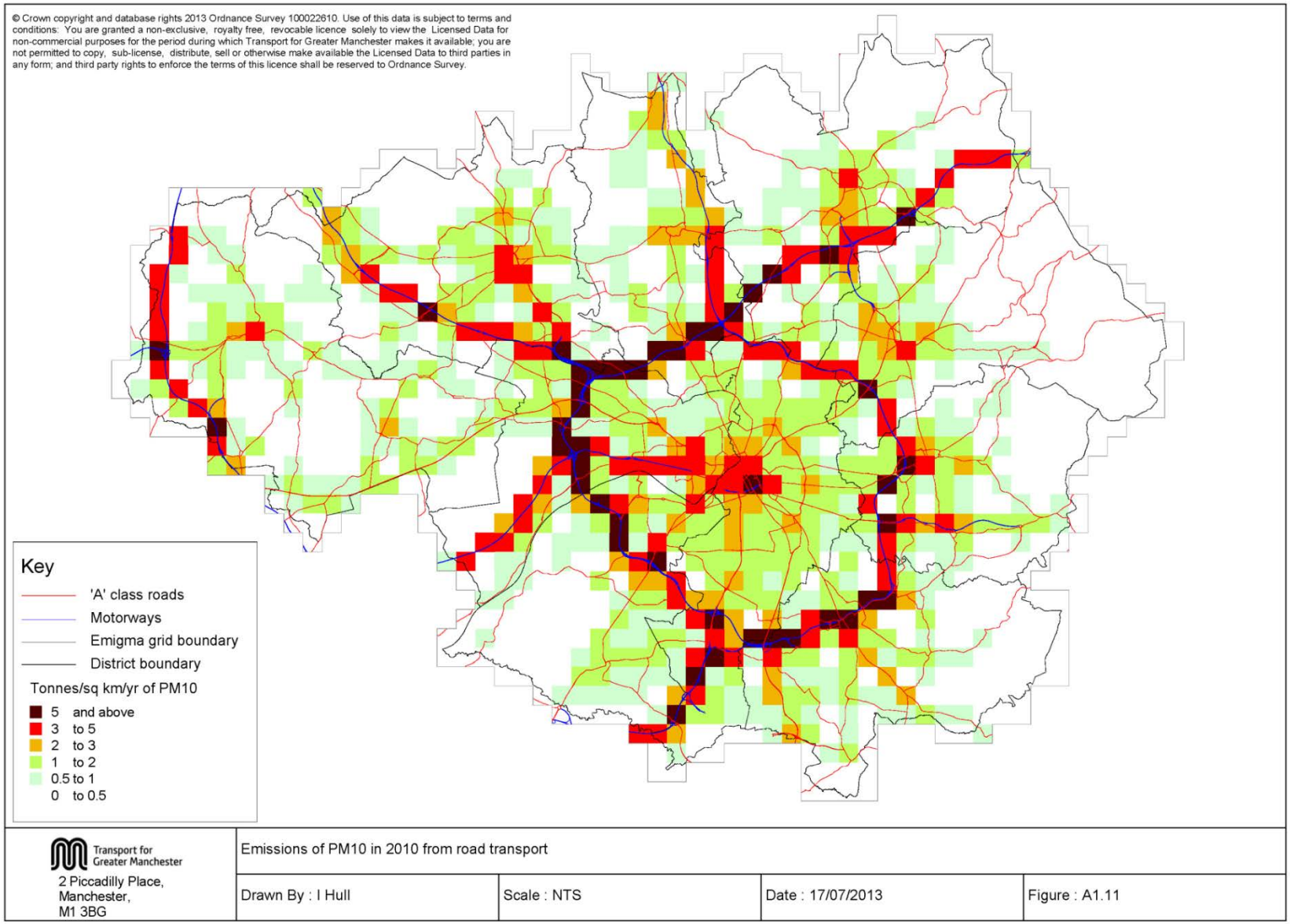
You know the pace at which things are moving. You know the plans that are projected for the North West. At the heart of these plans is HIGH SPEED GAS. Modern buildings, prosperous shopping centres, efficient factories, happy homes . . . they're all there in the crystal ball for anyone who looks into the gas proposition. For gas is the flame of the future . . . High Speed Gas that keeps pace with tomorrow's world. Make the most of it today.
High Speed Gas
for towns of the future

6. PHOTO

Source: Town Hall Photographer's Collection, GB127.M850, Negative No: 1967-0599.
https://www.flickr.com/photos/manchesterarchiveplus/38345607164/
Courtesy of Manchester City Libraries and Archives.

7. MAP



Source: HFAS Report 1750, Highway Forecasting and Analytical Services, Transport for Greater Manchester, June 2013.
http://www.gmtu.gov.uk/reports/emigma/HFASReport1750v1.0.pdf

Smoke free zone

Cleaning the air for healthier modern cities
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* Lord Newton, Chairman of the Departmental Committee on Smoke Abatement

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Trinity Mirror Mirrorpix
Alamy Stock Photo

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