

Soviet map translation sheet

Map Key

Green – Military establishments

Black – Industrial sites

Purple – Government and administrative buildings

General Information

Manchester, a metropolitan borough in the county of Lancashire (Great Britain) is a large military, industrial and trade centre and an important transport hub for the country. It is situated in the west of Great Britain, at the foot of the Pennine Hills, 50km east of Liverpool with which it is linked by the Manchester Ship Canal. The population of Manchester is 541,500 (according to data from 1971) but including the suburbs and satellite towns Bolton, Bury, Oldham, Rochdale, Salford, Stockport etc. the population stands at 2,387,000. These towns spread into Manchester proper, forming a continuous band of conurbation (approximately 500km²) which will hereinafter be considered an integral part of Manchester.

The Surrounding Area

The low foothills of the Pennines (300-500m high) extend to the northern and eastern edges of the city. The ridges of these hills are usually wide and undulating with rounded summits. The gradient of the hills is 6-16 degrees. The river valleys running between the hills are deep but relatively wide, allowing for easy access; many railways and roads pass along them. The soil is predominately loamy and sandy here. To the south and west of the city the terrain is flat: 15 to 90m. The surface of the terrain is level or undulating and rarely hilly. The soil in this area is also generally loamy with occasional boulders, and sandy in the river valleys. The only obstacles to transport off the road are the numerous rivers and canals. The most significant of these are the rivers Mersey and Irwell, which are 20-60m wide and 3m deep. The river beds are pebbly or sandy with meandering channels. The low banks are alternately gently sloping and steep; protective dams have been constructed at intervals along them. Generally other rivers are less than 20m wide (occasionally up to 40m wide) and 2m deep. The largest canal near the city is the Manchester Ship Canal, which is accessible to large sea-going ships and is 30-75m wide and 8.5-9m deep. Other canals, such as the Rochdale and Macclesfield canals which link the city to the country's inland waterways, are less than 20m wide and up to 1.5m deep. In the winter they only freeze for a short period in unusually cold years, and then are covered by a thin layer of fragile ice. The rivers are full all year round

and the water level is highest between November and February. The water level in the canals is regulated through a system of locks and sluices. There are not many woods in the outskirts of the city: generally only copses and small areas of parkland. However, numerous hedges border the fields, and trees and shrubs are planted along the roads which creates an impression of wooded areas and considerably obstructs views of the area. An extensive network of roads in the outskirts of Manchester allows for the movement of traffic throughout the year in all directions. The main roads (including a section of the European main road, the E33) have an asphalt-concrete and cement surface and two carriageways 11m wide, each divided in half to be 5-7.6m wide. The motorways have an improved surface of asphalt-concrete or asphalt; the carriageway is 8-12m wide and the roadbed is 17-27m wide. The carriageway of an improved surface highway is enclosed by stone curbs and specially equipped exit ramps are available every 100-150m. Retroreflective devices on the motorways and main roads, especially those on the approach to the city, facilitate traffic flow at night and in fog. Other minor roads have an asphalt surface; the carriageways are 6-9m wide (minimum 3-5m) and the road beds are 10-12m wide. The areas around Manchester are densely populated; small industrial towns, workers' settlements and housing estates form a belt of continuous conurbation that stretches for tens of kilometres to the west and north-west. Rural settlements are usually farms consisting of one- or two-storey houses and several farm buildings. Small villages of 50-500 inhabitants can be found at crossroads, generally including scattered buildings and stone houses of 1-3 storeys. All the settlements in the Manchester region have electricity, telephone and telegraph links and many have running water. From the air, Manchester can be recognised by its considerable size, its position relative to Liverpool, the Manchester Ship Canal, the Mersey estuary and the characteristic pattern of road networks.

The Urban Area

Manchester does not have a unified layout. The historical centre (the 'Old Town') today forms the administrative and business centre. It is located on the left bank of the river Irwell where it occupies an area adjacent to the market square (U-20) and the main train station (unit 6). The layout of the Old Town is more or less rectangular. This area is densely, in places continuously, built-up. The houses are predominately 3-7 storeys, stone, in an old architectural style and have thick walls and deep basements. In recent years here there has been a significant increase in the number of modern buildings of 15-20 storeys or more, made from concrete and glass. The main thoroughfares within the Old Town are usually straight and wide, while the rest are relatively narrow and not suited to the increased circulation of modern modes of transport. The road surface is asphalt. The administrative organs of Manchester are concentrated in the Old Town, including the town hall, the court (unit 211), the police department (unit 157), the post office (unit 168), large banks, the offices of commercial and industrial firms and insurance companies, hotels, restaurants and departments stores. The business centre is bordered in the north and south by large residential areas which have a rectangular or radial layout. These areas are generally

densely built up. Alongside the multi-storey, recently-built homes are neighbourhoods consisting of small, 1-3 storey, old-fashioned buildings, encircled by a garden front and back. To the west and east of the centre are the industrial zones of Manchester, where 2-4 storey standard houses are grouped around large industrial factories. In the outskirts of the town are recently developed housing estates which have a loose layout and are less densely built-up. The houses here are well built, with varying numbers of storeys. In the town centre there is little greenery, but there are extensive parks and public gardens outside the city limits, especially in the north and south, and small woods between the buildings.

Manchester is a significant scientific and cultural centre of the country. In the city there is a university (unit 217) with a large radio-astronomy observatory that is equipped with one of the most powerful radio telescopes in the world. In addition, there is also a technical college, other higher education institutions, a number of medium-sized specialist schools and colleges, several scientific research institutes, physics laboratories (for nuclear physics research), medical laboratories (for cancer research) and textile laboratories (creating new artificial fibres and improving the properties of natural fibres). In terms of publishing, Manchester is the second only to London. The city has large libraries, museums including a rich art gallery, theatres and other cultural and educational institutions. Potential underground shelters include coal mines (the biggest of these are units 242-243, situated in the western outskirts of the city), railway tunnels (including Disley tunnel which is 3.5 km long, unit 215) and the basements often found in the old buildings in the city centre. Open cast mines and adits (horizontal entrances to underground mines) could also be used as shelters, both in the city and the surrounding areas.

Industrial and Transport Units

The leading industries in Manchester are coal mining, mechanical engineering (especially electrical engineering, machine tool construction and the construction of transportation) and military production. Local mechanical engineering firms produce radio-electronic apparatus, generators, transformers, steam and gas turbines, computing equipment, lorries, cars, buses, passenger train carriages, locomotives, steam boilers, ship engines, mining equipment, textile and chemical plants and various types of mechanical equipment (including those for grinding, drilling and gear-cutting tools and lathes). Military factories produce missiles, transport and anti-submarine aircraft, artillery and other military equipment. Factories of ferrous and non-ferrous metallurgy produce cast iron, piping, wire, copper, lead, magnesium etc. The oil refining and chemical industries are important installations and produce artificial fibres, plastics, synthetic rubber, oxygen, dyes, medicines etc. The main industry, especially in the satellite towns, is textiles, principally producing cotton and silk. There are a number of enterprises for sewing, leather and footwear goods, woodwork, food processing and even the production of building materials. Factories are among the most important military and industrial units and include: missile (unit 113), aviation (unit 43-46), artillery (unit 50), coal mines (including unit 242-243), coke factories (unit 73), metallurgy (including units 97 and 100 which constitute a complete production

cycle), iron (unit 137-139 and others), steel (including units 118, 119), copper smelting (unit 92), steel rolling (unit 120), machinery construction (units 79, 81-83, 87, 90 and others), mechanical (units 102, 106), metal working (unit 94), automotive (unit 47-49), train carriage construction (unit 57), locomotive and carriage repair (unit 75), electrical (units 142, 144-149), radio-electrical (including units 111, 112, 142), chemical (units 128-130, 143 and others) and large textile factories (including units 227, 229-233, 240). The region also boasts a flour factory (unit 108), several printing presses (units 212-214 and others) and cartographic printing presses (unit 221). The nuclear research, industrial and technical centre at Culcheth is also located in the Manchester area. The railway network in Manchester includes several dozen stations. The biggest of these are two passenger stations (U-20, A-20), three freight stations (units 194-196) and a sorting station (unit 198). The passenger stations are roomy and made of stone, and include goods sheds and high platforms. The sorting and freight stations have well-developed trackside facilities for freight, in addition to business and repair shops, indoor and outdoor warehouses, loading and unloading platforms and various lifting mechanisms. The Port of Manchester is one of the largest in Great Britain (the goods turnover in 1970 was 16.1 million tonnes) and is accessible for ships with draughts of up to 8m. The central area of the port is formed of two groups of docks (Kh-17, 18), each of which includes four basins. In addition, a number of basins, quays, warehouses and other port buildings can be found along the length of the Manchester Ship Canal and include those within the limits of the area of the map; some of the port buildings are situated on the river Mersey. The total length of mooring in the port is around 17km and the berths are between 7 and 12.2m deep. There are special berths for coal cargoes, bunker ships with liquid fuel, container transport and so on. Almost all the piers are connected to the railway line. Loading and unloading work in the port is mechanised. There are around 300 onshore cranes with a load rating of 1 to 30 tonnes, two floating cranes with a load rating of 60 to 120 tonnes, equipment for coal processing, conveyors (mainly used for unloading wood), four grain processors (including three floating), lorries with specialised bodies, electric trolley cars and other lifting and transport mechanisms. In the port area there are multi-storey warehouses (units 184, 189 etc.) suited to different purposes, warehouses for petroleum products (with a capacity of approximately 800,000 cubic metres), a grain elevator (unit 244) and refrigerators. Additionally there are several dry and floating docks (unit 30 among others) where large military ships can be repaired, including cruisers. Manchester Airport (unit 5) is an international airport that serves transcontinental airlines (Great Britain—USA, Great Britain—Canada etc.) for aeroplanes of all classes. There are three asphalt concrete runways (the main runway is 2750m long), taxiways serving the runways, hangars, open-air stances, a terminal, taxiways serving the facilities, warehouses, workshops for aircraft maintenance and repairs, weather stations and technical radio and lighting equipment for guiding night flights and those in difficult meteorological conditions. Around the city there are three more aerodromes, mainly serving local airlines; two of them (units 3 and 4) have asphalt-concrete runways and

one (unit 2) has a gravel runway. In the outskirts of the city there are various warehouses, including those for the logistical support of the Air Force.

Utilities and Healthcare Facilities

Manchester is supplied with electricity from local power plants (units 245-255) which are integrated into the country's energy supply. Gas is supplied from gas plants (including units 63-68). All urban areas are equipped with running water and sewerage systems. Sources of water are rivers and reservoirs. Waste water undergoes cleaning in specialised stations before being discharged into the waterways (units 199, 202, 206 and others). The main forms of transport within the city are buses and trams. There are many bus (units 16-21) and tram (including R-27) depots with their own repair facilities. Manchester is equipped for all modern forms of communication; underground telephone and telegraph cables link the city to London, Liverpool and other large urban centres of the country. Broadcasting stations and television centres operate out of Manchester. In the city there is an extensive network of healthcare facilities, including specialised hospitals, clinics and military hospitals. The largest hospitals (T-21; Y-20; R-21; B-28; M-7,8; U-14,15) are situated near the centre, in the north west of the city and in the suburb Bolton.