

Railway Engineering School  **Derby**



Introduction

The Railway Engineering School at Derby provides training in technical matters for members of the Mechanical and Electrical Engineering Department and the Signal and Telecommunications Department. Courses covering most aspects of railway engineering in these departments, from basic to advanced levels, are held throughout the year and are of one to four weeks' duration. The School is set in its own grounds in one of Britain's

busiest engineering centres and it offers working engineers the opportunity to increase their knowledge of important technological subjects in an environment ideal for practical study. Specialist instructors, who are drawn from within BR, use teaching programmes based on practical experience as well as technical qualifications and are backed by an extensive range of modern training facilities.

How the School has developed

The main buildings date from 1938. They were constructed at the instigation of Sir Josiah Stamp, then President of the London Midland and Scottish Railway, to accommodate the LMS School of Transport for training operating staff.

The architect, W.H. Hamlyn, provided an imposing building incorporating five classrooms, a fully equipped cinema and library and single study-bedrooms for the students.

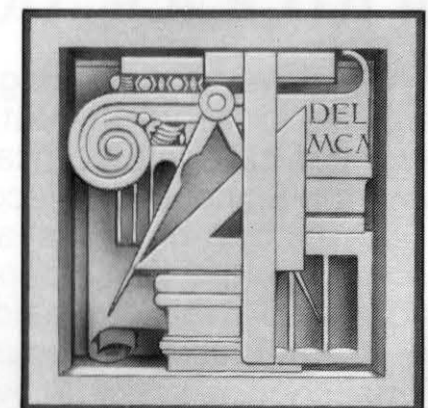
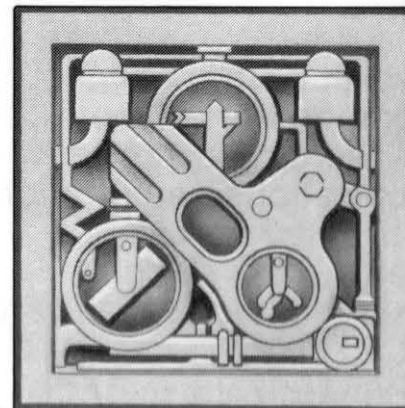
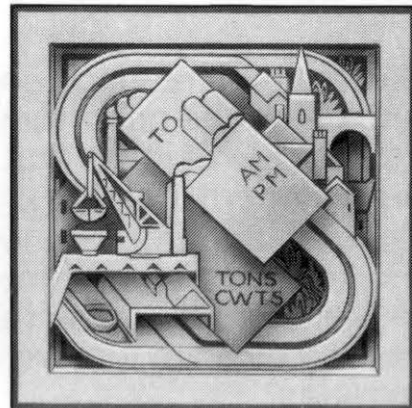
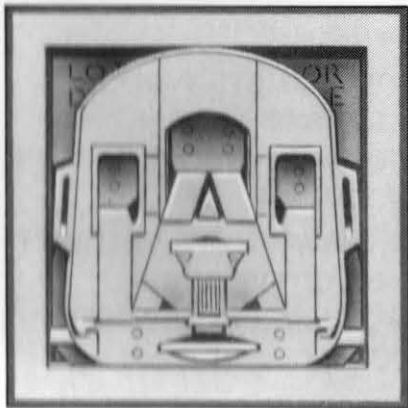
The major programme of dieselisation launched in the 1950s brought with it the need to train maintenance staff on the new motive power, and the School of Transport became a base for this work. A diesel demonstration block was built at the rear of the original buildings and the first mechanical and electrical engineering courses started in 1956. Since

then the scope of the courses has expanded and a further building was added to give more room for equipment and extra teaching space.

In 1958 the operating courses were replaced by middle management courses and further alterations were made to improve the buildings. The mixture of M&EE and management courses lasted until 1976 when the central training school for the Signal and Telecommunications department was set up, and Derby became the Railway Engineering School.

To accommodate the latest teaching equipment, some internal conversion work was carried out to provide signalling demonstration rooms and electronics laboratories. Facilities in the lecture hall were also improved.

In 1980 a new teaching block, named Astel House, was opened providing additional demonstration and lecture rooms and laboratories for signal and telecommunication engineering courses, together with a new three storey bedroom block.



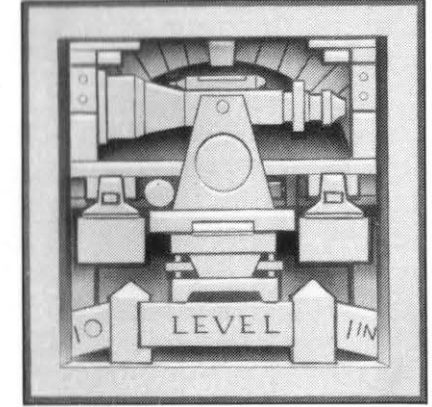
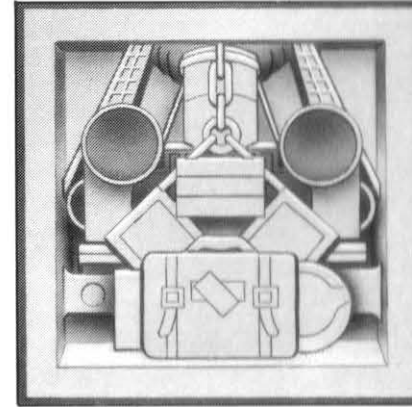
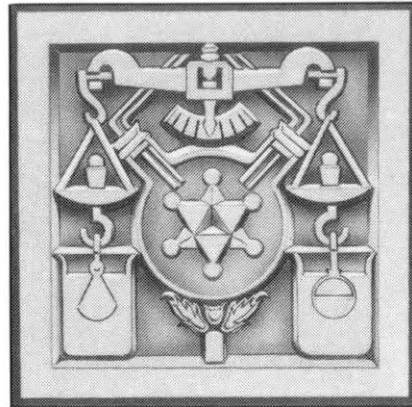
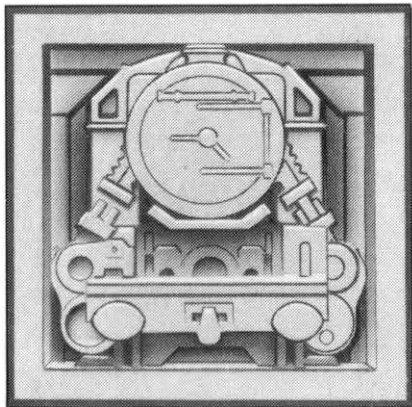
Control and organisation

Control of the School's activities is exercised at several levels. At the highest level, the Governing Committee, chaired by the Director of Engineering and including the Engineering Directors for the M&EE and S&TE, deals with matters of policy and general strategy so as to ensure that the training given is consistent with the needs of the business and of the user departments.

Each of the user departments has a Training Advisory Group, chaired by a senior professional engineer who also sits on the Governing Committee. These Advisory Groups include both regional and headquarters engineers and training specialists who are concerned with the assessment of training needs within their own departments, deciding the programming, syllabus and content of the courses and monitoring the effectiveness of the training given

in relation to departmental requirements. In assessing training needs, engineering managers at regional and divisional level are involved so as to ensure that the programme of courses is continuously updated to cope with changing technology and fresh problems.

Day to day control of the School is vested in the Principal, who is responsible for maintaining standards, ensuring that departmental requirements are met and providing the proper environment within which the School can achieve its objectives. In this he is assisted by the Chief Instructors and Bursar, who make up the management team within the School.



The courses

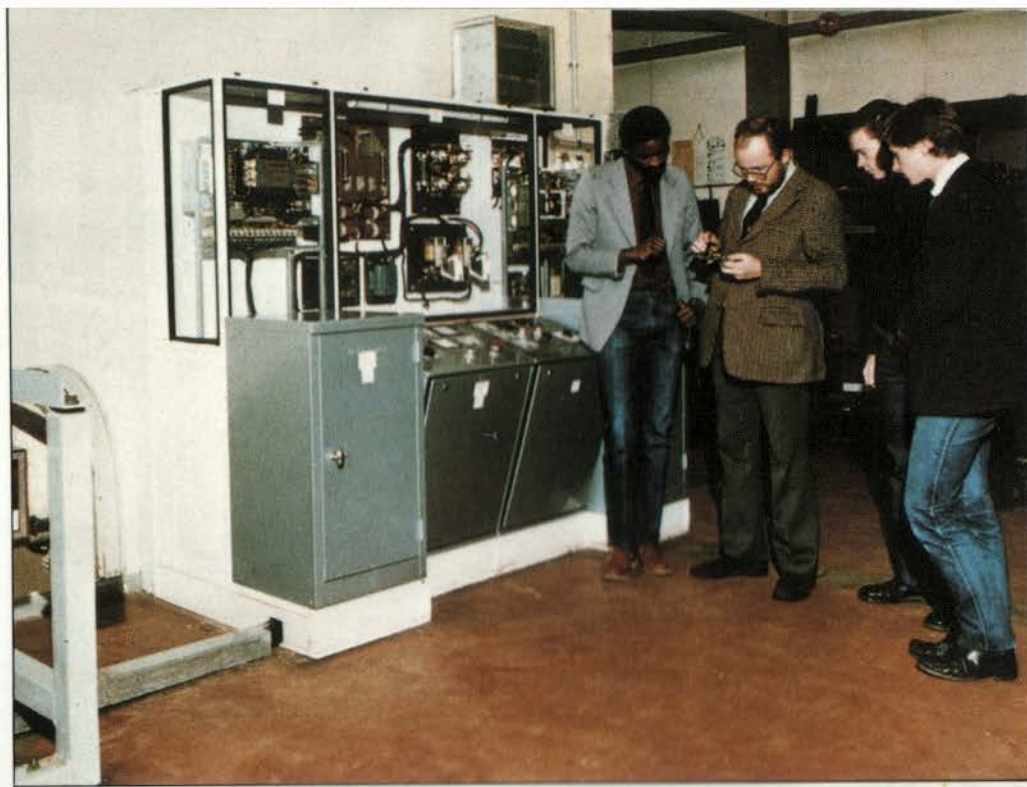
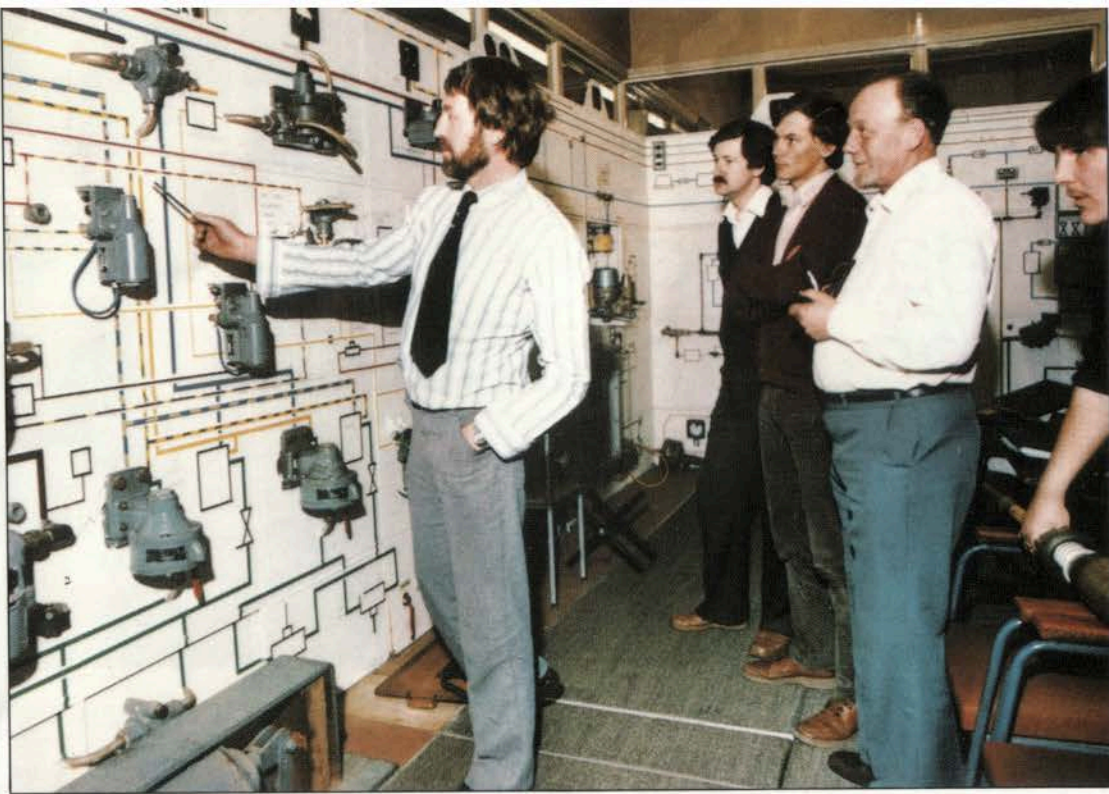
The present resources of the School allow up to twelve courses to be taught simultaneously. The average course consists of 10 to 12 students which ensures a good deal of individual tuition, especially in practical work. In the advanced courses there is considerable emphasis on practical fault finding. The employment of practising engineers as instructors guarantees that courses contain a high percentage of practical work and avoids undue academic bias.

Mechanical and Electrical Engineering courses cover all aspects of the departments' work. These courses, attended mainly by managers and supervisors, include training in basic diesel traction, brake systems, air-conditioning, electronics and hydraulic systems. More advanced courses deal with specific equipment and rolling stock, e.g. Mark II and Mark III coaches, Class 56 and Class 58 locomotives, HST, APT and the latest electric multiple units. Other subjects include re-railing and the transport of dangerous goods.

Signal and Telecommunications Engineering training is chiefly aimed at senior technician and technician officer grades. Current courses provide instruction from basic electronics to microprocessing and advanced courses include those on remote control equipment, train description, geographical systems, data transmission and switching systems.

The School is involved in training graduate engineers in both departments, and specific courses are run for this purpose. Prior to the introduction of new equipment, the School devises training programmes so as to ensure that staff are trained and ready to deal with their changing responsibilities. In addition the School also houses seminars and short courses arranged by other departments, providing accommodation and advice on curricular design.





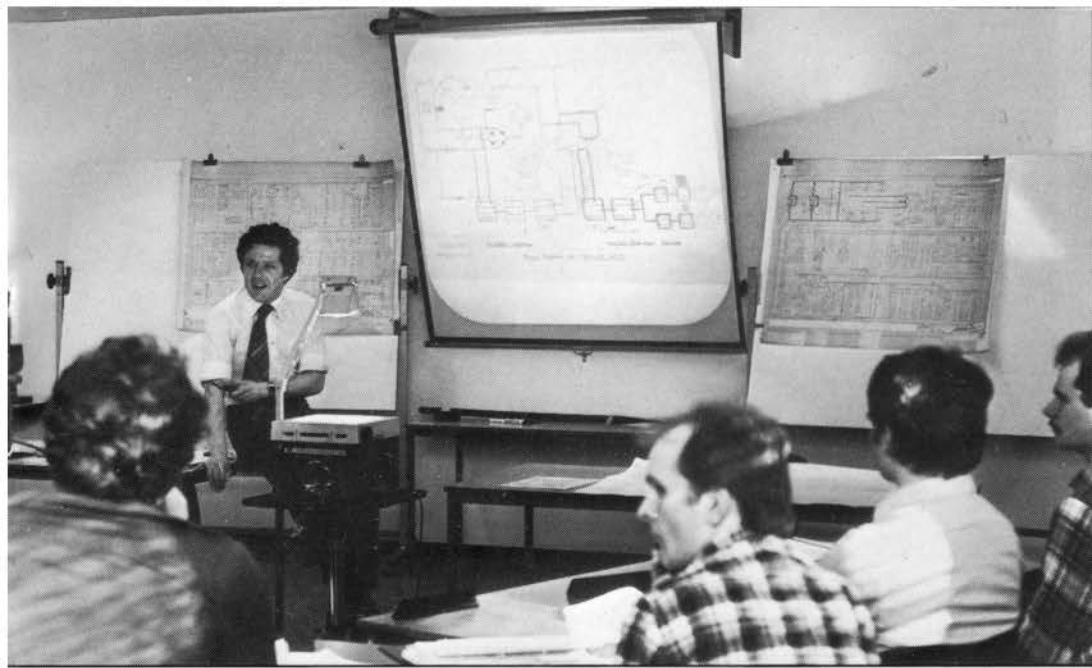


Staffing and teaching accommodation

Each department faculty is headed by a Chief Instructor who is responsible for the execution of the agreed programme, detailed course planning and validation of results. He is assisted by a team of instructors, all of whom are also practising engineers and have been trained in instructional techniques. Instructors are drawn from their respective departments and they return to engineering posts at the end of their period at the School.

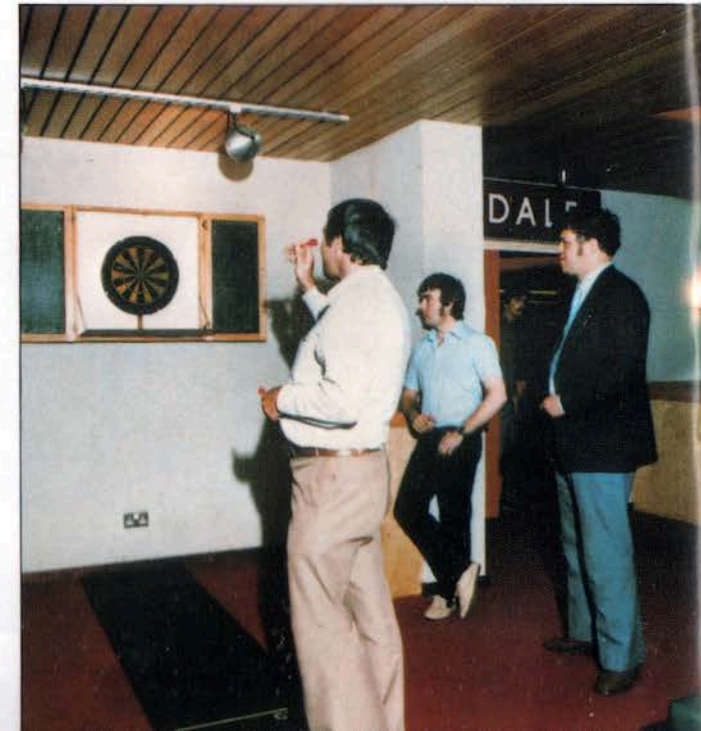
The main building includes the lecture hall and demonstration rooms. Astel House incorporates seven demonstration rooms and eight classrooms/laboratories with offices and workshops. The demonstration rooms house a wide variety of signalling and telecommunications equipment providing comprehensive practical work. The Mechanical and Electrical Engineering block and its ancillary building accommodate equipment used for practical work on diesel engines, brakes, air-conditioning, hydraulic systems and many other aspects within this department's field. All equipment is arranged to facilitate the student's understanding of its methods of operation.

Instructors have available a full range of Audio-visual equipment to assist presentation and students have access to a number of self-paced teaching programmes specially devised to aid them in revision work.



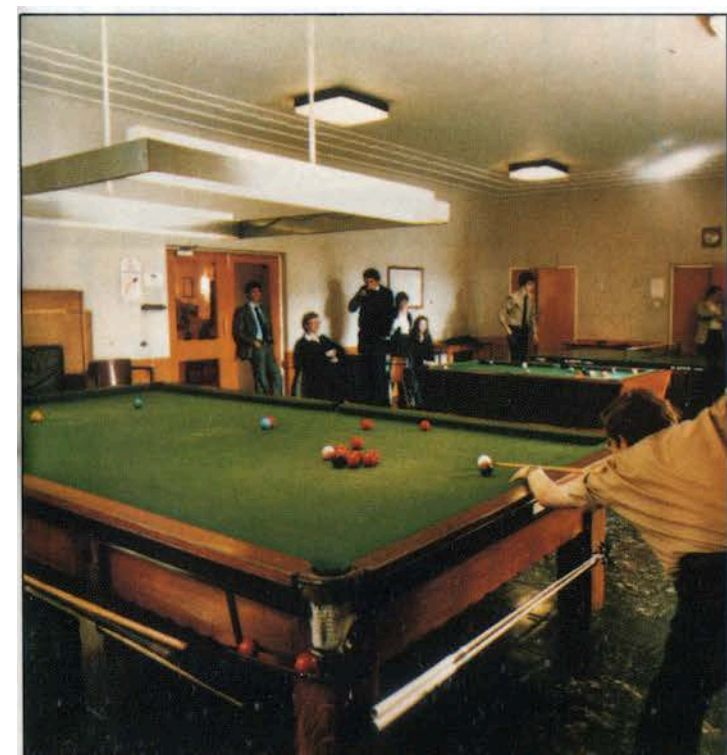
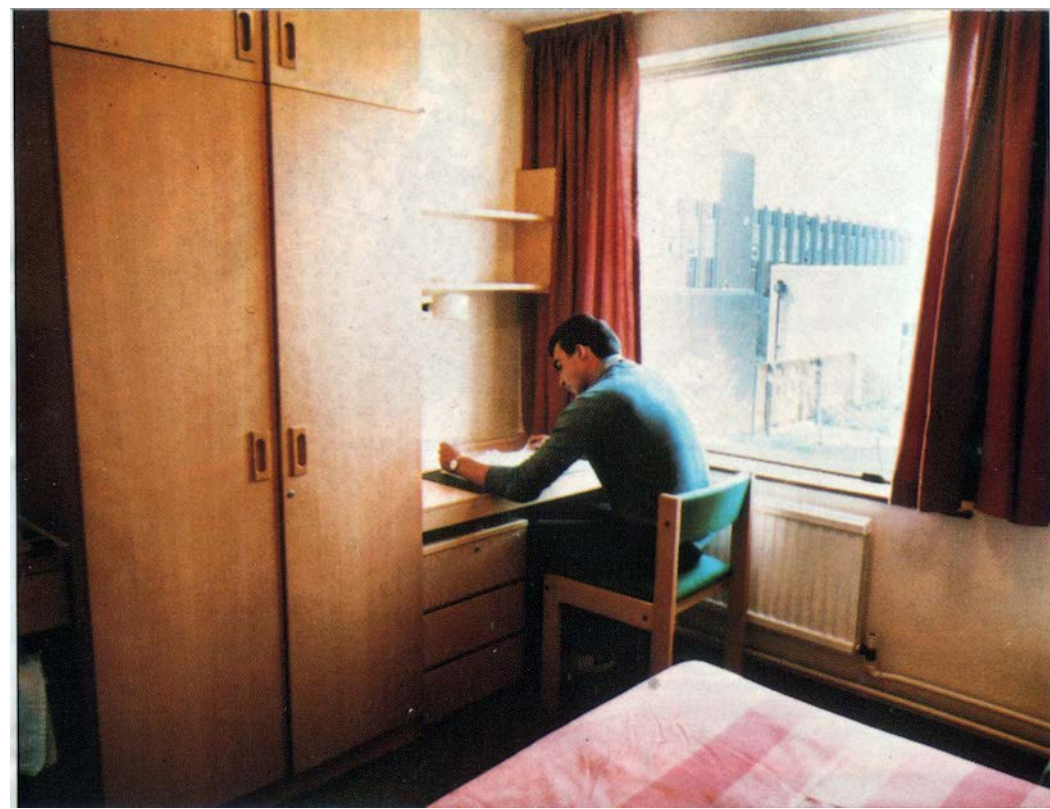
Residential

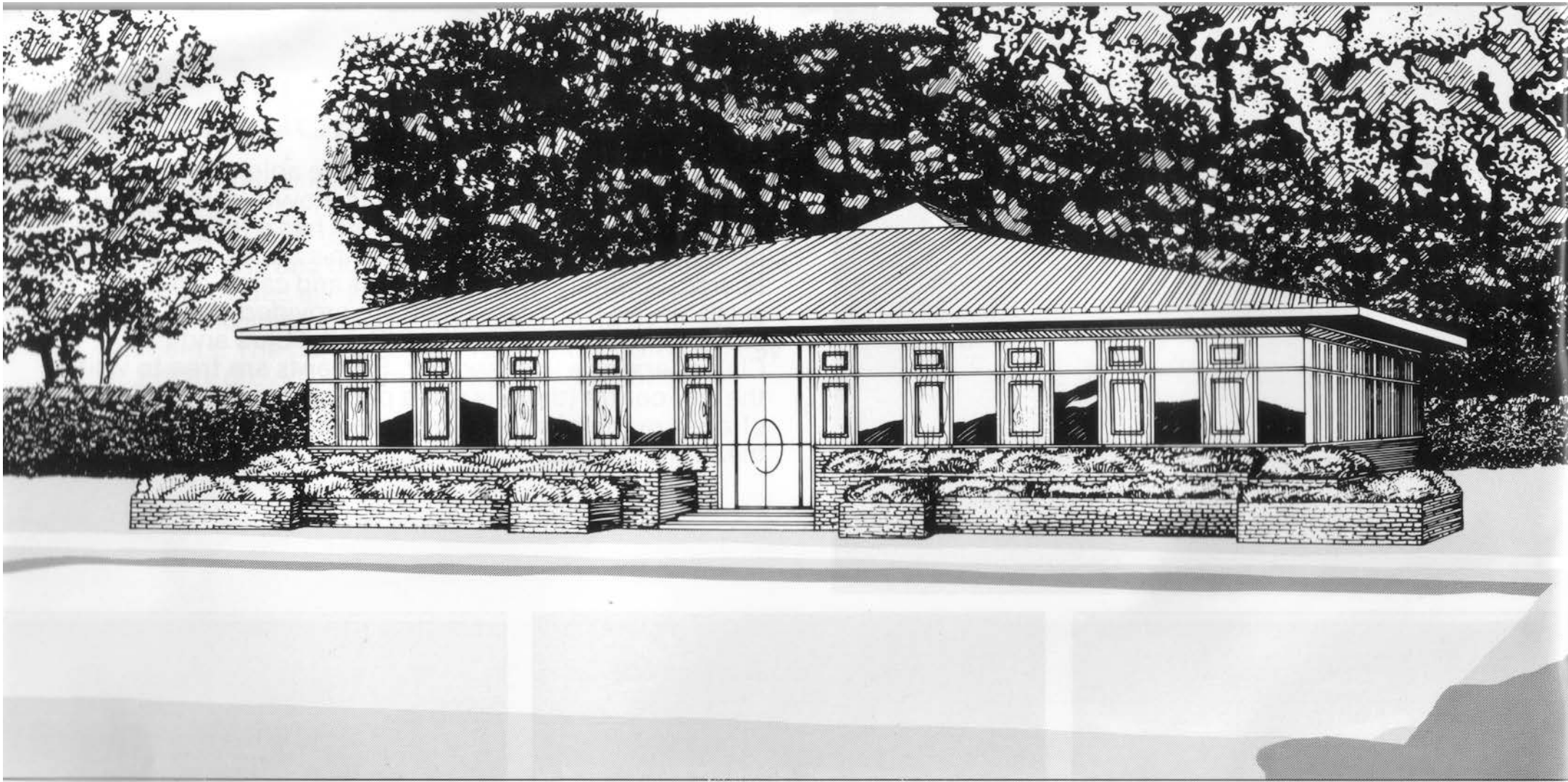
The main building of the School accommodates 61 students on the upper floors in single study-bedrooms, each equipped with a wash basin, razor socket, desk and built-in wardrobe. The new bedroom block provides another 59 study-bedrooms with similar facilities, giving a total capacity of 120 students. The School is fully residential from Monday to Friday providing all meals but it is not normally open at weekends.



Recreation

Outside working hours students are able to relax in a variety of outdoor games - tennis, bowls, putting and croquet. Indoors, the games room has a full-sized billiard table, pool table, table tennis tables and dart boards; a variety of board games and cards are also available. Hi-fi and television are provided. All students are members of the School Club and the Club operates a licensed bar. Students are free to visit the city centre (there is good public transport) which offers a range of entertainments such as cinema, theatre and discos.

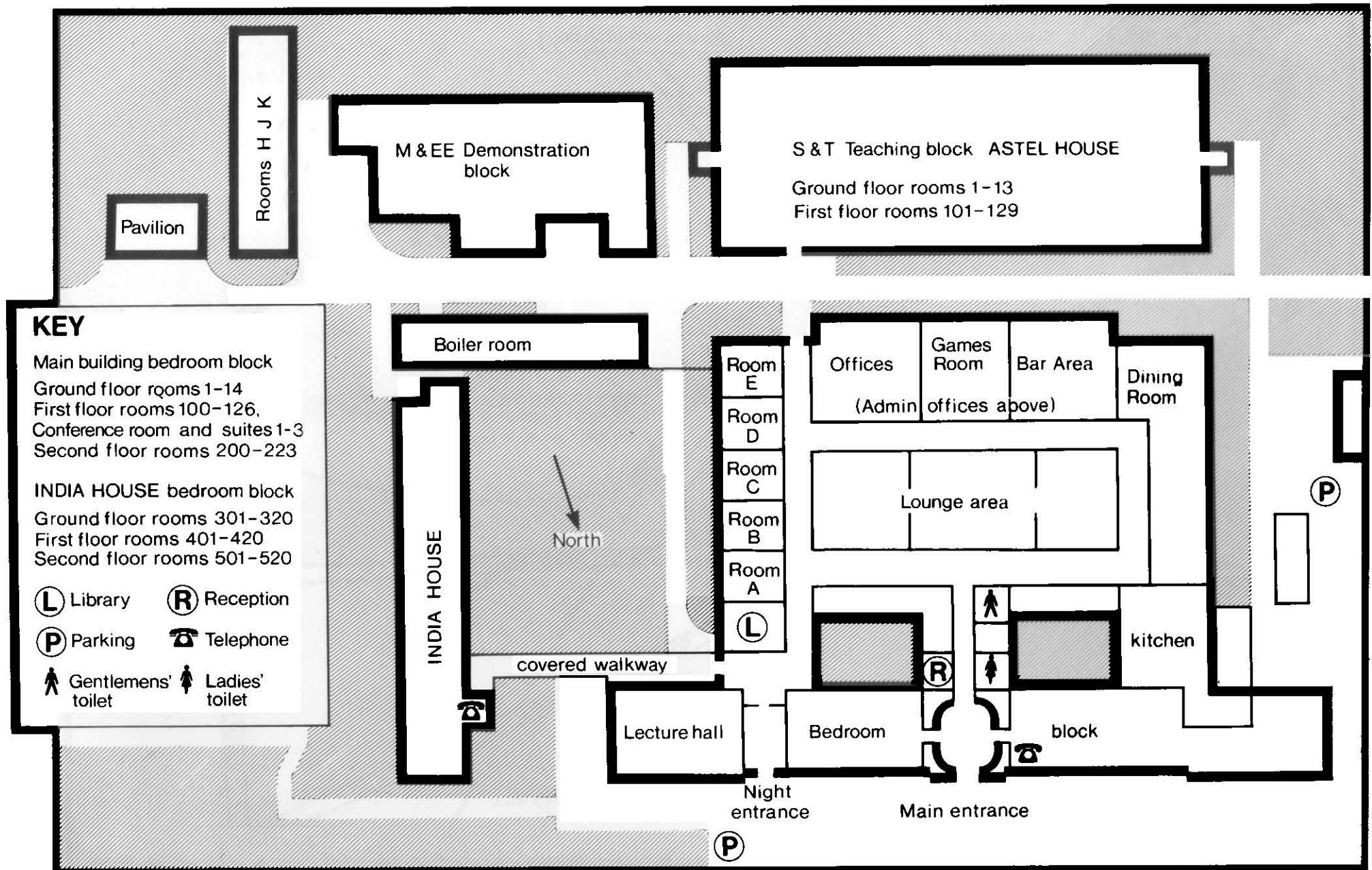




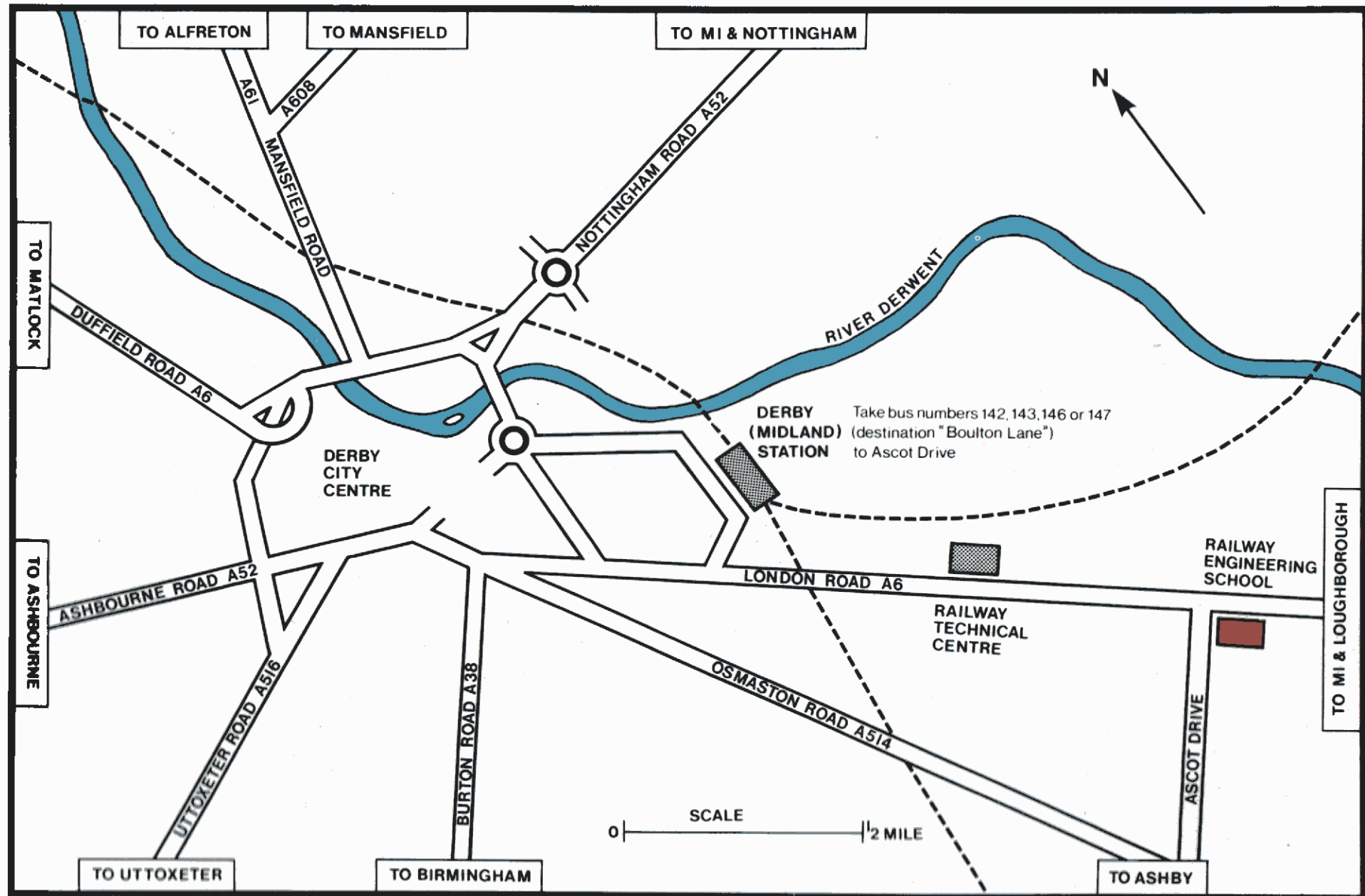
Future plans

The next stages in the development of the School are planned to improve Mechanical and Electrical Engineering facilities. They will provide new demonstration rooms and classrooms plus additional workshops and offices. A further phase is planned which will greatly improve the recreational amenities.

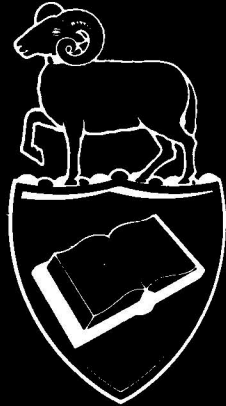
Plan of the School



How to get to the School



School Governing Committee



Chairman

I.D. Gardiner BSc(Eng), FEng, FIMechE, FIEE
Director of Engineering

M.V. Casey BSc(Eng), CEng, FIMechE
Director of Mechanical & Electrical Engineering

K.E. Hodgson CEng, FIEE, MCIT, FIRSE
Deputy Director of Signal & Telecommunications Engineering

J.E. Stephenson CEng, FIMechE
Services Engineer, Mechanical & Electrical Engineering

J. Thackway MA(Oxon), MIPM, FRSA
Director, Personnel Development

C.W. Underhill MA(Cantab), CEng, MICE, MCIT
Principal, Railway Engineering School

W.H. Whitehouse BSc, CEng, FIEE, FIRSE
Director of Signal & Telecommunications Engineering

