

# INSPECTION REPORT

## **Rolls-Royce Plc (Derby)**

24 June 2002



ADULT LEARNING  
INSPECTORATE

## Grading

Inspectors use a seven-point scale to summarise their judgements about the quality of learning sessions. The descriptors for the seven grades are:

- *grade 1 - excellent*
- *grade 2 - very good*
- *grade 3 - good*
- *grade 4 - satisfactory*
- *grade 5 - unsatisfactory*
- *grade 6 - poor*
- *grade 7 - very poor.*

Inspectors use a five-point scale to summarise their judgements about the quality of provision in occupational/curriculum areas and Jobcentre Plus programmes. The same scale is used to describe the quality of leadership and management, which includes quality assurance and equality of opportunity. The descriptors for the five grades are:

- *grade 1 - outstanding*
- *grade 2 - good*
- *grade 3 - satisfactory*
- *grade 4 - unsatisfactory*
- *grade 5 - very weak.*

The two grading scales relate to each other as follows:

SEVEN-POINT SCALE	FIVE-POINT SCALE
grade 1	grade 1
grade 2	
grade 3	grade 2
grade 4	grade 3
grade 5	grade 4
grade 6	grade 5
grade 7	

## Adult Learning Inspectorate

The Adult Learning Inspectorate (ALI) was established under the provisions of the *Learning and Skills Act 2000* to bring the inspection of all aspects of adult learning and work-based training within the remit of a single inspectorate. The ALI is responsible for inspecting a wide range of government-funded learning, including:

- work-based training for all people over 16
- provision in further education colleges for people aged 19 and over
- **learndirect** provision
- adult and community learning
- training funded by Jobcentre Plus
- education and training in prisons, at the invitation of her majesty's Chief Inspector of Prisons.

Inspections are carried out in accordance with the *Common Inspection Framework* by teams of full-time inspectors and part-time associate inspectors who have knowledge of, and experience in, the work which they inspect. All providers are invited to nominate a senior member of their staff to participate in the inspection as a team member.

## Inadequate provision

A provider's provision will normally be deemed to be less than adequate where

- one third or more of published grades for occupational/curriculum areas and Jobcentre Plus programmes are judged less than satisfactory, or
- leadership and management are judged to be less than satisfactory

The final decision as to whether the provision is inadequate rests with the Chief Inspector of Adult Learning. The overall judgement as to whether the provision is adequate or inadequate is included in the summary section of the inspection report.



## SUMMARY

### The provider

Rolls-Royce plc is one of the world's leading engineering companies, supplying aero engines and power systems to national and international markets. The learning and development centre is located at the Derby site and is the centre for company and customer training. It also provides work-based learning for 129 of its own employees on practical and technician advanced modern apprenticeship programmes in engineering.

### Overall judgement

The quality of provision is adequate to meet the reasonable needs of those receiving it. More specifically, work-based learning in engineering is good. The leadership and management of modern apprentice training, within the Rolls-Royce plc (Derby) learning and development business unit, is satisfactory. Quality assurance and equality of opportunity are also satisfactory.

## GRADES

Leadership and management	3
Contributory grades:	
Equality of opportunity	3
Quality assurance	3

Engineering, technology & manufacturing	2
Contributory grades:	
Work-based learning for young people	2

## KEY STRENGTHS

- particularly good training
- very good retention and achievement rates
- excellent community links
- particularly effective staff development
- good range of additional qualifications

## ROLLS-ROYCE PLC (DERBY)

### KEY WEAKNESSES

- ineffective monitoring of learners' progress
- insufficient co-ordination of training programmes

### OTHER IMPROVEMENTS NEEDED

- more staff involvement in the self-assessment process

## THE INSPECTION

1. A team of four inspectors spent a total of 17 days at Rolls-Royce plc (Derby) during June 2002. Inspectors interviewed 30 learners. They met 18 members of staff and visited two subcontracted colleges. Five learning sessions were observed, three in the local colleges and two in the learning and development centre. One progress review was also observed. Sixteen portfolios of evidence and 12 individual learning plans were examined, along with other company policies, procedures and documents. Inspectors also studied the fifth and most recent self-assessment report and action plan, which was produced in January 2002.

Grades awarded to learning sessions

	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Total
Engineering, technology & manufacturing	0	1	1	2	1	0	0	5
<b>Total</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>5</b>

## THE PROVIDER AS A WHOLE

### Context

2. Rolls-Royce plc (Rolls-Royce) is a major national and international engineering company, operating in 135 countries, with 43,000 employees worldwide. Just over 11,000 of these are based on the Derby site. Rolls-Royce has provided apprentice training for many years and there are currently 129 modern apprentices in training. Rolls-Royce is subdivided into a collection of business units, each operating as a separate entity, with its own management structure, income and expenditure targets, and staffing structure. Training and development is one of these business units and provides training programmes and courses for Rolls-Royce employees and customers. There are nine training officers, four of whom have specific responsibility for the modern apprenticeship training programme, six instructors and 15 assessors. In 2000, a £10 million learning and development centre was built on the Derby site. It has 19 training rooms, conference facilities, workshops, study booths and a research centre. There has also been investment in learning resources centres located within other business units and the development of an open access centre for both employees and the local community. The modern apprenticeship training programme takes three years to complete and consists of on- and off-the-job training and assessment. All learners are employed and are placed with a business unit according to their chosen training programme. All learners who successfully complete their training programme progress into employment with the company. Rolls Royce acknowledges the importance of a good learning environment and continual professional development for all staff.

3. Work-based learning programmes are funded through contracts with Derbyshire Learning and Skills Council (LSC). Rolls-Royce recruits most of its learners from the immediate locality. It operates its own recruitment campaigns, working closely with schools, colleges, and attending career events. The entry level for all applicants is a minimum of four general certificates of secondary education (GCSEs) at grade C or above for technician training, and at grade D or above for practical training, which must include mathematics, science and English. The selection and recruitment process involves interviews and a series of aptitude tests and activities.

4. The proportions of people from minority ethnic groups in Derby, and Derbyshire as a whole, are 9.7 per cent and 0.7 per cent respectively, compared with the national average of 6.2 per cent. In Derby, manufacturing accounts for 22.9 per cent of adult employment. In September 2001, the unemployment rate in Derby was 3.8 per cent, compared with the national average of 3.1 per cent. In Derby in 2001, the proportion of young people achieving five or more GCSEs at grade C or above was 43 per cent, compared with the average for Derbyshire of 52 per cent and the national average of 47.9 per cent. The proportion of 16 year olds who stayed in full-time education was 66 per cent in Derby and 68 per cent in Derbyshire, compared with the national average of 71 per cent.



### **Work-based learning for young people**

5. Retention and achievement rates are particularly good on the advanced modern apprenticeship training programme. For example, of those learners who started their training programme in 1996-97, 87 per cent achieved the full framework.

6. There is particularly good on-the-job training. Learners are able to compete in local and national skills awards. Individual learning support is outstanding and learners have good working relationships with training officers, line managers, workplace supervisors and other learners. Learners work towards a good range of additional qualifications and some learners progress to engineering degrees. Learners are involved in a wide range of enrichment activities, such as The Prince's Trust volunteer programmes, which are used effectively for the achievement of key skills. Learners have good access to outstanding resources, and work in world-leading laboratories, design offices, manufacturing cells, materials sourcing and test bed facilities. The recruitment and selection process is good and involves an initial interview and series of tests, followed by an interview for successful applicants with the training officer and representatives of those business units recruiting learners. Progress reviews are insufficiently thorough and learners' progress is not effectively monitored or recorded. The national vocational qualification (NVQ) assessment process is inadequate. There are no assessment plans, and no target dates are set for the achievement of NVQs.

## LEADERSHIP AND MANAGEMENT

Grade 3

7. The executive board of Rolls-Royce has 12 members, with one director responsible for human resources. Training and development is a separate department within human resources, which has its own training and development director. It is responsible for the provision of the modern apprenticeship training programme. Another department, early career recruitment, is responsible for, education liaison, recruitment and marketing. The apprentice training team comprises four training officers, who report directly to the head of learning operations, and five engineering instructors, who provide the off-the-job training and report to the manager for company programmes, who in turn reports to the head of learning operations. A restructuring of lines of reporting recently took place to more effectively link the apprenticeship training with other company training. Responsibility for modern apprentice training was moved from the early career development department to the training and development department. The training officers and the head of learning operations meet regularly to review the improvement plan and to monitor the provision of the apprenticeship training programme. The engineering apprentice development team produced its fifth self-assessment report in January 2002.

### STRENGTHS

- particularly effective staff development
- excellent community links
- good analysis of recruitment data
- good use of learner feedback

### WEAKNESSES

- insufficient co-ordination of training programmes
- inadequate use of data
- insufficient monitoring of equal opportunities in the workplace
- weak internal verification

### OTHER IMPROVEMENTS NEEDED

- more staff involvement in the self-assessment process
- better planning of internal auditing of key work processes

8. There is particularly effective staff development. All staff have access to an extensive range of courses and qualifications. Staff are encouraged to have regular developmental reviews with their immediate line manager and to discuss all their learning needs, regardless of whether they are related to the business objectives or personal aspirations. These are then built into the training budget for the business unit. All staff have a development diary in which training, courses attended and qualifications gained are well recorded. For example, a member of staff who had been with the company

since 1967 had compiled an extensive set of records, from which it was possible to track his personal and career development, from engineering apprentice to senior manager.

9. Rolls-Royce acknowledges its impact on the local community and the potential benefits its resources have for local organisations. It has excellent established links with local schools, providing advice, equipment and support for both in school and after school activities. In many cases, the learners act as links and role models for their previous school. In partnership with a local college, Rolls-Royce has built and established a learning centre on the perimeter of its site so that members of the local community have easy access. The courses provided are a mix of Rolls-Royce and commercial study materials and are available to Rolls-Royce employees and members of the public. Rolls-Royce employees and college staff jointly staff the learning centre. Rolls-Royce employees, including the advanced modern apprentices, can access these facilities during normal working hours for training-specific study, and at other times for personal development. The use of this learning centre is actively promoted to local community groups. Transport and crèche facilities are available. This learning centre achieved the Association of Colleges Beacon Award for lifelong learning in 2001.

10. After an initial period of off-the-job training in the learning and development centre, where learners achieve their NVQ at level 2, they move into business units within the Rolls-Royce Derby complex. Within the business units, learners have a structured training programme involving a series of attachments. Within each attachment skilled mentors provide the necessary training. The objectives for each attachment are clearly recorded at the start and reviewed on completion of the attachment. Progress towards completion of the NVQ at level 3 and key skills at level 2 for practical modern apprentices, and at level 3 for technical modern apprentices, is monitored and assessed by training officers from the training and development centre. Learners also attend a local college for further education.

11. There is insufficient co-ordination between the separate aspects of the training programme, a weakness not acknowledged in the self-assessment report. The requirements for the NVQ are not systematically planned into the learning objectives established for each attachment. Some learners are unable to complete some of the requirements of their NVQ or may collect too much evidence for other competences. One business unit has acknowledged this as a weakness and has matched the NVQ competences to the skills available within the attachments. Other business units across the company have not carried this out.

12. The engineering apprentice development team keeps computerised details of learners' personal details, as part of its comprehensive monitoring of recruitment and selection. These records include information on learners' gender, ethnicity, previous achievements, start dates, withdrawals, completions and progression into employment. However, it does not collect data on retention and achievement in an easily retrievable format or use these data to guide improvements. The information is not collated for regular reports and is not used as the basis for management decisions.

## Equality of opportunity

Contributory grade 3

13. Rolls-Royce effectively operates an equal opportunity policy which covers current legislation. The policy is reviewed annually and a senior manager is responsible for equality of opportunity within the company. There are also policies for dealing with harassment and grievances. The policy on harassment is particularly well written and clearly explains the company's policy towards all forms of harassment. All staff and learners are given relevant detailed information and a copy of the policies during their induction. Promotional materials are well designed and provide positive images and statements demonstrating the company's commitment to diversity and equality of opportunity. The training facilities at Rolls-Royce have been designed and built to provide good access for people with mobility difficulties.

14. A questionnaire is used to collect feedback from learners on their knowledge and understanding of equal opportunities issues. Although the questionnaire is analysed and the findings used to help determine any areas where more training is needed, the results of these analyses are not used adequately to improve the training programmes according to the learner feedback.

15. A comprehensive evaluation of recruitment data is carried out each year. Recruitment data are collected on ethnicity, gender and the applicants' school. An extensive analysis is then produced to compare successful and unsuccessful applicants. This process ensures that the recruitment process is carried out in line with the equal opportunities policy. All staff involved with recruitment are provided with equal opportunities training.

16. All aspects of equality of opportunity are carefully explained and reinforced at the start of the training programme. However, when learners move into the workplace there is insufficient monitoring or reinforcement of equal opportunities. Progress reviews do not sufficiently focus on equality, welfare and diversity issues. There is insufficient promotion or reinforcement of equal opportunities issues with those staff who work with learners. For example, in some office and workshop areas, unsuitable images are displayed on the walls.

## Quality assurance

## Contributory grade 3

17. Rolls-Royce is accredited with the ISO 9001 international standard for quality assurance. The company has a quality manager and a team that monitor the quality assurance system and conduct internal audits. The apprentice training department has process flow charts, which show the sequence of operations required to carry out their key work processes. These are well understood by staff and are an effective way of clearly showing what needs to be done to provide consistent application of tasks. The apprentice training department, however, does not carry out sufficiently thorough internal audits of the key work processes. This has been acknowledged in the self-assessment report as an area for improvement.

18. Questionnaires are issued to learners each year to collect their feedback about the training programmes. The results are analysed and an evaluation is produced. As a group, learners meet the training officers every week during their first year to discuss training and how it can be improved. Learner representatives also meet with the company training manager and training officers every two weeks in their first year to discuss the training programme and where improvements can be made. For example, following learners' feedback, improvements have been made to lighting in the training workshops, and clocks have been provided in the training workshop and in the rest areas.

19. There is weak internal verification of the NVQ and key skills. Portfolios of evidence are not monitored by an internal verifier until all the units have been completed. This can create delays in certification and does not provide internal verifiers with regular feedback on the learners and assessors. Formal meetings between assessors and internal verifiers have not taken place. Assessment and verification plans have only recently been produced. Portfolio evidence comprises almost totally of witnessed evidence. The latest external verifier report identified this as a weakness.

20. The apprentice training department produced the self-assessment report. It did not directly involve learners or workplace supervisors. Workplace supervisors were not able to comment on the content of the report. Inspectors agreed with many of the strengths and weaknesses acknowledged in the self-assessment report. Action plans, resulting from the self-assessment process, are reviewed and updated at quality review meetings held every three months.

### Good Practice

*Success is celebrated in all aspects of the training, with the company providing a variety of awards at annual presentations organised by training and development. These include awards for the learner who has overcome major difficulties, the learner who has made the most progress, as well as for the apprentice of the year. These regional winners then compete with other Rolls-Royce regional winners for the prestigious chairman's award.*

*Rolls-Royce, as part of its community initiatives, runs an ongoing project as part of its education liaison, with primary schools around Derbyshire. The objective is to introduce engineering principles through the medium of music and role-play to young children.*

## AREAS OF LEARNING

### Engineering, technology & manufacturing

Grade 2

Programmes inspected	Number of learners	Contributory grade
Work-based learning for young people	129	2

21. There are currently 129 learners on work-based learning programmes in engineering. All learners are advanced modern apprentices and are employees of the company. All learners carry out an initial assessment comprising mechanical comprehension, spatial awareness, technical appreciation and numeracy skills. Learners are recruited directly from schools and have high-level GCSE grades. Learners do not carry out a basic skills test or assessment of additional learning needs. In July, prospective learners complete a one-day pre-induction day. At the start of the training programme in September, learners complete a further three-day induction programme. Learners carry out nine months off-the-job training in the company's training centre, working towards an NVQ at level 2 in performing engineering operations. After completion of their NVQ at level 2, learners work towards an NVQ at level 3. Key skills training and assessment is carried out throughout the training programme. Learners are on the training programme for an average of two years and complete on-the-job training attachments to appropriate business units within the company. Learners also work towards a range of additional qualifications in engineering at local further and higher education colleges. Many learners progress to engineering degrees. Progress reviews are carried out every 12 weeks in the workplace by training officers who also assess and internally verify the NVQ, in partnership with some work-based assessors and many expert witnesses. A private contractor also carries out assessment in the workplace.

The following table shows the achievement and retention rates available up to the time of the inspection.

Work-based learning for young people																
Advanced modern apprenticeships (AMA)																
	2001-02		2000-01		1999-2000		1998-99		1997-98		1996-97					
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Number of starts	34		25		54		86		38		39					
Retained*	34		25		52		74		33		34	87				
Successfully completed	0		0		0		57		32		34	87				
Still in learning	34		25		52		17		1		0	0				

\*retained learners are those who have stayed in learning for at least the planned duration of their training programmes, or have successfully completed their programme within the time allowed

## **STRENGTHS**

- particularly good training
- outstanding individual learner support
- very good retention and achievement rates
- good range of additional qualifications
- good use of learners' additional activities for key skills evidence
- good access to outstanding resources for learners
- good recruitment and selection process

## **WEAKNESSES**

- insufficiently thorough progress reviews
- ineffective monitoring of learner progress
- inadequate NVQ assessment process

## **OTHER IMPROVEMENTS NEEDED**

- better understanding of NVQs by all mentors

22. Training is particularly good. Learners complete an initial period of competence training in the training provider's own training workshops, working towards an NVQ at level 2. Learners then move onto a very well planned period of training within different business units across the company. They receive good support and guidance from workplace supervisors and quickly develop as skilled co-workers. All learners demonstrate high levels of competence. Throughout their training, learners consistently produce good written and practical work. There is a range of in-company awards to celebrate learners' success. Learners are encouraged to compete in regional and national skills awards, in community projects and design-and-make project teams. The company promotes the acquisition of high-grade practical and technical skills. Learners' work is consistently at a higher standard than the requirements of the NVQ framework.

23. There is outstanding individual learner support. Learners have good working relationships with the training officers, line managers, workplace supervisors and other learners. They are encouraged to take responsibility for their own learning and have good access to a wide range of formal and informal support systems. Training officers and instructors provide good group and individual support during the first year of the training programme. In the second and third year of the training programme, learners carry out a range of attachments to business units within the company. Line managers agree learning targets with the learners for the attachment. Learners are required to



evaluate their own performance and are also evaluated by their managers and training officers. The learners work with experienced co-workers who provide continuous support, encouragement and contribute effectively to their progress. Training and development is a priority for staff, and learners are encouraged to progress with their training within the normal working day by line managers. Learners' feedback on the training programme is collected and evaluated regularly, and is used to implement improvements to the training programmes.

24. There are good retention and achievement rates. On average, less than 10 per cent of learners leave the training programme each year, and over 80 per cent of the learners achieve the full framework. All learners are expected to complete the training programme successfully. Learners are carefully selected and have particularly good GCSE results. Many learners progress to higher education. Key skills are achieved at level 2 or level 3, as appropriate, as an integral part of the training programme.

25. Learners are able to work towards a good range of additional qualifications. Learners work towards an appropriate further education qualification as well as their NVQ at level 3. Many learners also achieve nationally recognised certificates and some progress to engineering degrees. The company provides a range of in-house training programmes, including computer-aided design and technical drawing skills. Portfolio development workshops are provided. Learners work well to organise their work and achieve several additional qualifications during their training programme. Company policy promotes the achievement of NVQs at level 4 and 5.

26. Learners are encouraged to involve themselves in a wide range of enrichment activities. These include The Prince's Trust volunteer programmes, outward bound team-building events, promotion of schools' link activities, attendance at careers fairs, at air shows, in skills competitions, on annual apprentice exchanges with Germany, in design and manufacture competitions, and at the company's internal briefings and exhibitions. There is good use of evidence from these tasks for the achievement of key skills. Learners are able to explain effectively the value of their key skills qualification and relate its relevance to their current and future career aims.

27. Learners have good access to outstanding resources. Learners work in world-leading laboratories, design offices, manufacturing cells, materials sourcing or test bed facilities, according to which business unit they are assigned to. Learners have access to both critical manufacturing facilities and training venues. Learners work on high-cost production jobs which have significant cost and safety implications. Particularly good work is produced by the learners, and most learners have an understanding of their work beyond the requirements of the NVQ. They are valued by co-workers who help them to quickly develop relevant skills and knowledge.

28. The company operates a sophisticated and extensive recruitment and selection procedure. Potential learners are recruited early in their school-leaving year and carry out an initial interview and a series of selection tests. Successful applicants are then interviewed by a training officer and representatives of the business units, within the

company that are recruiting learners. The learners who are finally selected are invited into the company for a one-day pre-induction programme. Learners in the second year of their training programme are involved in this event. Immediately before joining the company learners are involved in a further induction event. Most learners then progress to the first-year off-the-job training programme in the training workshop. Some learners carry out a more specialist foundation year of training. For example, learners carry out a full-time off-the-job pattern-making course in a further education college. Training officers and instructors have a good understanding of learners' progress.

29. Progress reviews are insufficiently thorough. Learners' progress is not effectively monitored or recorded. The period between progress reviews varies from a few weeks to up to five months. This does not meet the LSC's contractual arrangements. Although the training officer, manager, human resource officer or other interested parties can attend the progress review, attendance is not adequately recorded on the progress review sheet. The date for the following progress review is not agreed or recorded. The progress review does not adequately inform the individual learner about their performance and how they can progress.

30. There is no effective system to monitor learners' progress and achievement. There is no effective planning of learners' progress. Training officers and managers are unaware of the progress of their learners. Regular targets are not set for the completion or achievement of units of the NVQ. The work attachment objectives and progress reviews do not review or set targets for their NVQ. There is no continuous assessment and accreditation of learners' achievements towards their NVQs.

31. The assessment process for the NVQ is inadequate. There are no assessment plans stating how units are to be achieved. Target dates are not set. There is insufficient use of varied assessment methods. There is an inappropriate use of witness testimonies to prove competence, which does not meet the requirements of the NVQ. For example, one portfolio contained 56 expert witness statements and no direct observations by an assessor. Evidence is signed off by a workplace supervisor and then countersigned by a qualified assessor. No other assessment is carried out by the assessor. No written feedback is given to learners about their performance and how they can progress. There is inconsistent cross-referencing of evidence logbooks with the evidence of achievement.

32. Learners are assigned a mentor in their area of work when they are on an attachment. Although the mentors are familiar with the business operations and needs of the company, and the traditional qualifications such as the national certificates and higher national diplomas, they do not fully understand the requirements of the NVQ.

### Good Practice

*Rolls-Royce runs a Saturday morning engineering club on its premises called Vroom Challenge, for year 9 pupils from local schools. Learners work with the school children to design, build and race a pedal-powered car. The club helps to promote Rolls-Royce to the local community and also helps develop learners' interpersonal and engineering skills. Learners use the skills gained working with the club to demonstrate achievement of their key skills.*