

INSPECTION REPORT

BAE Systems PLC

24 September 2004



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 learning within the remit of a single inspectorate. The ALI is responsible for inspecting a wide range of government-funded learning, including:

- work-based learning 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.

Overall judgement

Where the overall judgement is that the provision is adequate, only those aspects of the provision which are less than satisfactory will be reinspected.

Provision will normally be deemed to be inadequate where:

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

This provision will be subject to a full reinspection.

The final decision as to whether the provision is inadequate rests with the Chief Inspector of Adult Learning. A statement as to whether the provision is adequate or not is included in the summary section of the inspection report.

INSPECTION REPORT

BAE Systems PLC

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INSPECTION REPORT

DESCRIPTION OF THE PROVIDER

1. BAE Systems Plc (BAE Systems) is an international company engaged in the development, delivery and support of advanced defence and aerospace systems. The company designs, manufactures and supports military aircraft, surface ships, submarines, radar, avionics, communications, electronics and guided weapons systems. BAE Systems is established in the emerging defence business sectors of support services and solutions, integrated command and control, communications, computing, intelligence, surveillance and reconnaissance. The company has major operations throughout five continents and customers in 130 countries. It has more than 90,000 employees worldwide and generates annual sales of approximately £12 billion through its wholly owned and joint venture operations. BAE Systems employs over 37,000 people in the United Kingdom (UK).
2. The air systems business employs 10,500 people on four key national strategic military aircraft programmes: the Typhoon Eurofighter, the Nimrod, the Hawk, and the Joint Strike Fighter. It operates on four main sites: Warton and Samlesbury in Lancashire; Brough in the East Riding of Yorkshire; and Woodford in Cheshire.
3. The submarine business's main office is at Barrow-in-Furness. The site is designated as a submarine centre of excellence. The Devonshire Dock Hall at the Barrow-in-Furness site is where the Astute Class of nuclear attack submarines is being constructed.
4. The avionics group is one of Europe's leading avionics companies, and the UK's foremost supplier of electronic systems for military platforms in the air, at sea and on land. With its head office at Basildon in the UK, the avionics organisation has major sites in Scotland and southern England. The group employs 4,800 people.
5. BAE Systems offers advanced modern apprenticeships in engineering in its three principal business areas, at 11 of its sites in England. Advanced modern apprenticeships in business administration are offered at the aircraft business sites in the Northwest. Programmes are funded through the National Contract Service of the Learning and Skills Council (LSC). Before 2002, the company had nine separate contracts with local LSCs covering the main business areas of aircraft, marine and avionics. These contracts were replaced in July 2002 by a single contract with the National Contract Service. The contract for the advanced apprentice programmes is managed centrally by BAE Systems' human relations department at Fulwood, near Preston. Delivery of the programmes is managed by local regional teams at the BAE Systems sites throughout the country.

SCOPE OF PROVISION

Engineering, technology & manufacturing

6. BAE Systems has 703 learners on engineering advanced modern apprenticeships,

BAE SYSTEMS PLC

working towards level 3 national vocational qualifications (NVQs). Learners follow programmes in either craft or technician studies, depending on their entry qualifications. Typically, those with three to five general certificates of secondary education (GCSE) subjects at grades A to C, including mathematics, English and a science subject, join the technician programmes, and those with grades A to E start on the craft programmes. All learners are employed by the company at one of its main regional business units. The programmes are structured to meet the different local operational needs and circumstances at the regional training centres. All the regional programmes fully satisfy the requirements of the awarding body's advanced modern apprenticeship framework. At some units the whole training programme is conducted in-house, at others extensive use is made of subcontractors, and some use a more balanced mixture of in-house training and contracted provision. All of the regional training centres are approved centres for the modern apprenticeship frameworks.

Business administration, management & professional

7. Thirty-seven learners are advanced modern apprentices, of whom 19 are women. All learners are employed in work placements at BAE Systems' air business sites in the Preston area. All are working towards an NVQ at level 3 in business administration. All learners complete an initial assessment of their literacy and numeracy skills. An induction programme provides information about the content of apprenticeship training. Learners attend a local further education college for one day each week during the first year of the programme for training in work-specific information technology (IT) skills and to prepare for the technical certificate. Learners are visited in their placements by training staff every four to six weeks to provide support and carry out assessments. A formal review of progress is completed for each learner every 12 weeks.

ABOUT THE INSPECTION

Number of inspectors	14
Number of inspection days	70
Number of learner interviews	172
Number of staff interviews	68
Number of employer interviews	32
Number of subcontractor interviews	16
Number of locations/sites/learning centres visited	12
Number of visits	50

OVERALL JUDGEMENT

8. The quality of the provision is adequate to meet the reasonable needs of those receiving it. More specifically, the quality of work-based learning in engineering, technology and manufacturing and business administration, management and professional is good. BAE Systems' leadership and management and its approach to equality of opportunity are good. Arrangements for the quality assurance of its programmes are satisfactory.

GRADES

grade 1= outstanding, grade 2 = good, grade 3 = satisfactory, grade 4 = unsatisfactory, grade 5 = very weak

Leadership and management		2
Contributory grades:		
Equality of opportunity		2
Quality assurance		3

Engineering, technology & manufacturing		2
Contributory areas:	Number of learners	Contributory grade
Other contributory areas - Work-based learning for young people	703	2

Business administration, management & professional		2
Contributory areas:	Number of learners	Contributory grade
Business administration - Work-based learning for young people	37	2

KEY FINDINGS

Achievement and standards

9. **The retention and achievement rates for learners on engineering programmes are very good.** The retention rate for the 380 advanced modern apprentices who started during the period 1999-2001 is 88 per cent. Of the 790 advanced modern apprentices starting since 2001, 84 per cent are still in training and a further 6 per cent have completed their full modern apprenticeship framework. Ninety per cent of the learners starting in 1999-2000 and 66 per cent of the 206 starters in 2000-01 have completed their frameworks, with 20 per cent of the 2001 entry still in training.

10. **Achievement and retention rates are also very good for learners on the business administration programme.** For learners starting the programme in 1999-2000, the achievement and retention rates were 85 per cent. Achievement and retention rates for learners starting in 2000-01 were both 92 per cent. Of the 46 learners who started during the period 2002-04, 11 have successfully completed the modern apprenticeship framework and a further 32 are still on the programme. The five learners who started in 2004-05 are still in training. The rate of achievement of the technical certificate is very good, with 95 per cent of the 46 learners who started during 2002-03 and 2003-04 having successfully completed both parts of the technical certificate.

11. **Learners on engineering programmes complete a wide range of additional training programmes and qualifications.** All learners complete the wider key skills, and a very

good proportion progress from their technical certificates to higher national certificates and other qualifications. A significant number are sponsored through university to complete an engineering degree. All learners complete a range of additional vocational training programmes.

12. Engineering learners develop very good levels of skill. After completing their off-the-job training, they rapidly develop high-level skills, and are able to work to exacting standards. They are encouraged to take responsibility for their work and, although well supported, they are encouraged to work independently at an early stage in their training.

13. Training sessions for business administration learners are carefully prepared and delivered by well-qualified staff. BAE Systems has a very good range of additional training and enrichment activities. This additional training prepares learners well for their work placements and enables them to develop the skills and competences needed to make successful careers in the company.

Quality of education and training

14. Training is good throughout the engineering apprenticeship, with the initial training being particularly effective. Initial training focuses on developing industry-specific skills. This prepares learners well for carrying out active roles in the workplace at an early stage of their programme.

15. The induction programme for aeronautical learners and avionics is particularly thorough. The first three weeks of training are dedicated to providing learners with all the information relevant to their modern apprenticeships. A well-planned and interesting timetable of lessons and events provides learners with the opportunity to absorb the complex requirements of the aeronautical training programme

16. Learners progress well from the engineering programmes into employment and posts of responsibility. Most learners progress from training contracts to permanent employment when they complete their modern apprenticeships. Many former apprentices have made good progress in their careers since completing their training. On all sites, many of the senior managers, and in some instances the directors, are former modern apprentices.

17. The company provides and supports a very extensive range of enrichment activities for all its learners. Learners participate fully in the various programmes and value the opportunities that they provide for personal and career development. Good additional training is provided for engineering learners to obtain certificated qualifications in first-aid, health and safety, computer skills, the use of spreadsheets, and project management skills.

18. On- and off-the-job training are good for business administration learners. Training sessions are carefully prepared and delivered by well-qualified staff. Additional training prepares learners well for their placements and enables them to develop the skills and

competences needed to make successful careers in the company.

19. The company's arrangements for managing the business administration learners' work placements are very effective and successful. Placements are well designed to prepare learners for a career in BAE Systems; they are intended to provide learners with an insight to a range of company activities, before their first appointment in the company on completion of their modern apprenticeship frameworks. Work placements offer learners a wide range of appropriate training opportunities.

20. Business administration learning resources are good, both in-company and at the subcontractor's college. In the workplace, learners use the company's extensive range of modern business and information technology (IT) resources as a normal part of their work activities. At each site, learners have access to a learning centre staffed by a full-time learning professional.

21. The initial assessment of business administration learners is satisfactory. All learners complete an assessment of their literacy and numeracy skills. The company sets a high standard for recruitment and most learners do not need additional support.

22. All learners benefit greatly from the very effective support they receive from all levels within the company. Senior managers and directors take a keen interest, actively participating in special events to celebrate achievements. Learners are visited every two to three weeks for informal and pastoral support. Lines of communication are very clear to learners, who show a very good understanding of appeals, grievance, equality and diversity procedures. Personal issues are dealt with sensitively during progress reviews. Learners have access to trained workplace counsellors qualified in occupational welfare and counselling. Where extra support is needed it is quickly organised and provided.

23. Progress review practice is satisfactory for all learners. They are visited by training staff in their work placement every 12 weeks. Learners' progress towards agreed targets is monitored and revised as necessary. Learners' understanding of equal opportunities is checked at each progress review.

24. The company has good links with external organisations that are very effective for recruitment and developing learners' personal skills. BAE systems has many school links aimed at widening participation by under-represented groups and raising the profile of engineering careers. Some learners, men and women, have the role of school ambassadors, visiting schools to offer advice and practical help to students. Other learners benefit from similar development opportunities, by acting as guides escorting important visitors around the company or as hosting delegates on the company's exhibition stands.

25. BAE Systems' arrangements for identifying engineering learners' additional learning support needs are inadequate at some locations. The company has a rigorous process for testing the aptitude and suitability of potential entrants to the apprenticeship programmes. However, the recruitment tests do not assess levels of competence in literacy and numeracy and there are no company-wide arrangements for diagnostic

testing of these or other additional learning needs.

26. At all sites there is insufficient on-the-job-assessment of engineering learners by direct observation. Assessors rely heavily on witness testimonies and supporting written evidence when making assessment decisions. Planning of assessment opportunities is weak at a number of sites. Often the planning of assessment is over-dependent on learners identifying the assessment opportunities themselves. The company has recognised this shortcoming, but measures to improve the process have not been fully implemented.

27. The internal verification process for engineering learners is weak at a number of sites, in particular the three sites in the Preston area and those at Woodford and Basildon. Internal verification is only carried out at the end of the programmes. Internal verifiers carry out only a few direct observations of assessment. They rely too much on sampling learners' portfolios and written work.

28. Internal verification practice for learners on the business administration programme is poor. It does not fully comply with the guidance on internal verification provided by the awarding body. Sampling of assessors' judgements takes place only at the end of a programme. Written feedback is provided to assessors at this stage. There is no observation of assessors in the workplace.

29. Short- and medium-term target-setting for marine engineering learners at Barrow-in-Furness is weak. Targets set in the learners' individual learning plans and at progress reviews are vague and do not clearly specify meaningful objectives that give learners sufficient guidance or direction. Learners do not have a written on-the-job learning plan, but rely on the informal arrangements of the training co-ordinator.

Leadership and management

30. BAE Systems' strategic direction to support the recruitment of young people and develop their capabilities is good. Staff at all levels, from the chief executive through to managers, are significantly involved in the learners' training and coaching, and in the celebration of their successes. The company has established a 'manufacturing council', an internal body which provides strategic direction, as well as monitoring and managing the continuous improvement of the training programme.

31. The apprentice training programmes are very well managed at strategic and operational levels. There is a clear strategic direction and strong corporate commitment supported by responsive and strong local management. Corporate objectives and targets are translated into targets for individual staff. Comprehensive arrangements set objectives and actions identified from the self-assessment process and the localised development plans.

32. BAE Systems has a range of good partnerships and links with external organisations. Staff at various levels are members of several national and local groups and working parties, such as engineering forums, sector skills groups, colleges and schools. These

networking activities are particularly effective in ensuring that the staff are knowledgeable about the latest developments in technology and training.

33. The company has good internal and external communications to support its links and partnerships. Regular contact is maintained with external organisations; for example, frequent formal and informal meetings take place with college representatives. There are regular team and management meetings, many of which have a strong focus on the learner, and which provide effective forums for the sharing of information and good practice.

34. Staff appraisals, training and development are satisfactory. All staff are appraised annually and there are also six-monthly reviews. The annual performance and development review relates to the business plan and its targets. Individual performance targets are set which focus on improving the delivery of the training programme. Appraisals are very clearly linked to staff development. Thorough arrangements exist for staff training and development, which are linked to the needs of both the organisation and the individual member of staff.

35. The management of information is satisfactory. A central system of learner data is maintained and analysed. The data is used to monitor the progress of learners and to support decision-making. However, more appropriate measures of performance are currently being considered so as to better inform business planning and target-setting.

36. Careful attention is paid to the health and safety of learners, and this is effectively monitored throughout their programmes. Health and safety is an established culture and is supported by comprehensive policies. Activities such as induction, progress reviews, monitoring and risk assessment all emphasise the importance of health and safety. Manuals are up to date, internal audits are carried out, and accidents are reported and analysed. Learners have a clear understanding of health and safety issues.

37. Arrangements for managing the subcontracted provision are satisfactory. Regular communications are maintained and subcontractors are involved effectively with the development and delivery of training. There are monitoring arrangements, although service level agreements have been introduced recently to formalise roles and responsibilities more effectively, and monitor performance against agreed targets.

38. The management of equality of opportunity, and of diversity, is good throughout the company. **Good procedures support equality of opportunity and respect at work.** The company has comprehensive complaints and appeals procedures. Learners have a good understanding of the procedures, and have confidence in their implementation. At a corporate level, formal complaints are thoroughly investigated. Learners are appreciative of the thoroughness and sensitivity of managers in investigating and resolving issues. The company provides good support mechanisms for those who feel exposed to harassment. For example, trained volunteer staff, who are very knowledgeable about the company's 'respect at work' policies and procedures, are readily available throughout the business units. Their role is to provide an informal first point of contact for those who have concerns, but who may lack the confidence to take matters further.

39. Learners have good awareness of the company's 'respect at work' policies and procedures. Most learners have particularly effective recall of their equality of opportunity induction, and can confidently access information on the BAE Systems intranet. Learners' awareness and understanding is effectively reinforced at 12-weekly progress review meetings.

40. Recruitment to support equality of opportunity and widening participation is satisfactory. BAE Systems trains within an industry that has a traditionally low number of female and minority ethnic learners in engineering. Overall, the company has had some limited success in increasing its number of female learners. Of the 137 learners recruited in 2004, nine were women. In the same year, four learners enrolled from local minority ethnic groups. All were men. The company has made satisfactory efforts to widen participation. Suitable data is collected and analysed to inform decision-making. Realistic, but challenging widening participation targets are set and regularly monitored at business unit and corporate levels.

41. Staff training in equality of opportunity and diversity is satisfactory. Supervisors associated with learners have recently had training, or have it scheduled as part of their personal development programmes.

42. Physical access to on-the-job training areas is generally satisfactory in the context of engineering industry working practice. Much of the practical work in the marine and aircraft manufacturing and assembly areas requires learners to be able to climb structures, work in confined spaces and work safely at heights. The company places a high priority on the management of the risks associated with these activities and the health and safety of all of its employees. Learners have the importance of safe working practices instilled effectively at induction and reinforced throughout their training.

43. Quality assurance of the training programmes is satisfactory. BAE Systems' business units have appropriate policies and procedures that contribute satisfactorily to continuous improvement. Procedures do, however, vary in their application and effectiveness between business units. The company is currently developing an overall corporate quality assurance system, but this has not been fully implemented.

44. The collection of feedback is satisfactory. All learners have a 12-weekly progress review, where their progress is monitored and recorded. In most business units, learners provide a good, structured evaluation of work placements. In some cases these are particularly thoughtful and clearly expressed. There are examples of where feedback has led to programme improvement. BAE Systems is also involved in the piloting of an independent national online learner questionnaire for trainers in the engineering industry. Results from the first cycle of this have been effectively incorporated into the internal review process of some business units.

45. The collection and use of data is satisfactory enough to contribute to improvement in most business units. A suitable online management information system is readily available, and most business units make effective use of the appropriate range of data

collected and analysed. However, data is not used sufficiently at Basildon and Rochester to contribute to improvements. Regular and systematic audits are conducted at all business units, and the results are reviewed satisfactorily at business unit and corporate level.

46. BAE Systems' most recent corporate self-assessment report was published in August 2004. Information was supplied by satisfactory internal reviews conducted at most business units. Some business units, for example Barrow-in-Furness, Brough, Rochester and Basildon, produced comprehensive internal reviews. However, the self-assessment report is not sufficiently detailed and does not differentiate enough between the relative strengths and weaknesses of the provision. The report was of limited value to inspectors in evaluating the provision. All learning centres have developed suitable action plans, linked with overall corporate objectives, which are regularly monitored.

47. **Some quality assurance is weak.** In the northwest aviation business unit monitoring of assessments is limited. There are no meetings to standardise assessment decisions. Internal verification is not planned sufficiently at Basildon. Assessments are not observed. Although internal assessment at Brough is judged overall to be satisfactory, internal verification opportunities are not planned sufficiently during the year. In the business administration programme, internal verification does not conform to the published joint awarding body guidance. There is no recording of the assessment of assessors. BAE Systems is aware of these issues and has taken action to resolve them. Teaching and learning are not systematically observed either on or off the job. BAE Systems has recognised this weakness and has trained staff at all business units to carry out the observation of training. The company has produced a schedule and plans to begin observations in the near future.

Leadership and management

Strengths

- good strategic direction to develop young people's abilities
- very effective management of modern apprenticeship training programmes
- good partnerships and links with external organisations
- good implementation of equality of opportunity and 'respect at work policies'

Weaknesses

- some weak quality assurance

Engineering, technology & manufacturing

Other contributory areas

Strengths

- very good retention and achievement rates
- good achievement of additional qualifications
- good development of skills
- good standard of training
- good progression into employment
- very effective support for learners
- good induction for aeronautical and avionics learners
- good enrichment activities
- good links with external organisations
- well-managed training

Weaknesses

- inadequate arrangements for additional learning support needs
- insufficient on-the-job assessment by direct observation
- weak internal verification processes at Basildon and Preston
- weak short- and medium-term target-setting for marine learners

Business administration, management & professional

Business administration

Strengths

- very good retention and achievement rates
- good mainstream and enhanced training
- very effective work-placement practice
- good resources

Weaknesses

- poor internal verification practice

WHAT LEARNERS LIKE ABOUT BAE SYSTEMS PLC:

- the variety of work placements
- the good support from staff
- the specialist training opportunities
- the good training
- the good development opportunities
- the good progression opportunities
- the choice of careers
- additional qualifications
- being treated like adults
- 'people will spend time with you'
- the outdoor team-building course- 'good experience'
- the provider is local
- being trained and paid

WHAT LEARNERS THINK BAE SYSTEMS PLC COULD IMPROVE:

- the number of more realistic jobs in the training school (Preston)
- the transition from college to work (Barrow-in-Furness)
- the length of college days - they are too long
- the opportunities to participate in the overseas programme (Preston)
- the organisation of college days - not done very well (Brough)

KEY CHALLENGES FOR BAE SYSTEMS PLC:

- improve the consistency of the internal verification processes
- increase the number of assessments by direct observations
- set more focused and consistent targets for learners
- improve the identification and sharing of good practice
- increase the participation of under-represented groups
- improve the identification and support of learners with literacy and numeracy skills needs
- improve the self-assessment process
- develop a more consistent approach to the quality assurance of programmes

DETAILED INSPECTION FINDINGS

LEADERSHIP AND MANAGEMENT

Grade 2

Strengths

- good strategic direction to develop young people's abilities
- very effective management of modern apprenticeship training programmes
- good partnerships and links with external organisations
- good implementation of equality of opportunity and 'respect at work policies'

Weaknesses

- some weak quality assurance

48. BAE Systems' strategic direction to support the recruitment of young people and develop their abilities is good. This is evident from the involvement of the chief executive through to managers at all levels in the learners' training and coaching and in the celebration of their success. The company has established a 'manufacturing council', an internal body which provides strategic direction as well as monitoring and managing the continuous improvement of the training programme. A strategic framework is partially established to facilitate closer integration of the business units, while maintaining their autonomy, and the concept of 'best fit', where appropriate. The company has a young persons' strategy which emphasises its long-term commitment to, and investment in, young people and the development of their abilities. Similarly, the company's training strategy for work-based learning programmes focuses on arrangements to ensure the delivery of quality training programmes.

49. The modern apprenticeship training programme is very well managed both at strategic and operational levels. There is a clear strategic direction and strong corporate commitment, supported by strong and responsive local management. Corporate objectives and targets are translated into targets for individual staff. Thorough arrangements facilitate the setting of objectives and actions identified through the self-assessment process and the localised development plans. Staff demonstrate a clear understanding of the aims, objectives and values of the organisation. Staff are deployed effectively and staffing resources are well managed to support the provision of training and learning. Learners benefit from the open and flexible ethos of staff teamwork and the high levels of commitment and support shown by staff. Staff have a good understanding of training activities and issues that affect their own practice and the experiences of the learners. Staff are well supported and good development opportunities are available.

50. BAE Systems has a range of good partnerships and links with external organisations. Staff at various levels are members of several national and local groups and working parties, such as engineering forums, sector skills groups, colleges and schools. These

networking activities are particularly effective in ensuring that staff are knowledgeable about the latest developments in technology and training, and that learners have high-quality work placements and relevant training. Good internal and external communications support these links and partnerships. Regular contact is maintained with external organisations; for example, frequent formal and informal meetings take place with college representatives. Regular team and management meetings have agendas and standing items. An effective record of each meeting is made and planned actions are well monitored. Many of the meetings have a strong focus on the learner, and provide effective forums to share information and good practice.

51. Staff appraisals, training and development are satisfactory. All staff are appraised annually and there are also six-monthly reviews. The annual performance and development review links with the business plan and its related targets. Individual performance targets focus on improving the delivery of the training programme. Appraisals are very clearly linked to staff development. Staff training and development arrangements include the needs of the company and the individual member of staff.

52. The management of information is satisfactory. A central system of learner data is maintained and analysed. The data is used to monitor the progress of learners and to support decision-making. However, more appropriate measures of performance are currently being considered, to improve business planning and target-setting.

53. Careful attention is paid to the health and safety of learners, which is effectively monitored throughout their programmes. Health and safety is established in the provider's culture and supported by comprehensive policies. Activities such as induction, progress reviews, monitoring and risk assessment, all emphasise the importance of health and safety. Manuals are up to date, internal audits are carried out and accidents are reported and analysed. Learners have a clear understanding of health and safety issues.

54. The arrangements for managing the subcontracted provision are satisfactory. Regular communications are maintained and subcontractors are involved effectively with the development and delivery of training. Service level agreements have been introduced recently to formalise roles and responsibilities more efficiently, and monitor performance against agreed targets.

55. Learners identified as in need of additional help are provided with the appropriate support through the local college of further education. However, the company does not have a fully operational written strategy, or a plan for the implementation of literacy, numeracy and language support. No written reports are produced on the effectiveness of the support provided. The company has a comprehensive and detailed literacy and numeracy skills strategy. This was being introduced to all sites at the time of inspection.

Equality of opportunity

Contributory grade 2

56. The management of equality of opportunity, and of diversity, is good across the whole company.

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57. Good procedures support equality of opportunity and respect at work. The company has strong and effective complaints and appeals procedures. Learners have a good understanding of the procedures, and have confidence in their implementation. At a corporate level, formal complaints are thoroughly investigated. Reports on matters raised, and their resolution, are provided to BAE Systems' senior management. However, most complaints are resolved effectively at local business unit level. Learners appreciate the thoroughness and sensitivity of managers in investigating and resolving issues. The company provides good support mechanisms for those who feel exposed to harassment. Trained volunteer staff, who are very knowledgeable about the company's 'respect at work' policies and procedures, are readily accessible throughout the business units. Their role is to provide an informal first point of contact for those learners who have concerns, but who may lack the confidence to take matters further.

58. Learners are well aware of the company's 'respect at work' policies and procedures. Most learners have particularly effective recall of their equality of opportunity induction, and can confidently access information on the BAE Systems intranet. Learners' awareness and understanding is reinforced effectively at the 12-weekly progress review meetings.

59. Recruitment to support equality of opportunity and widening participation is satisfactory. The engineering industry has a traditionally low number of female and minority ethnic learners. Overall, the company has had some limited success in increasing its number of female learners. Of the 137 learners recruited in 2004, nine are women. In the same year, four male learners from local minority ethnic groups joined the programme. The company has made satisfactory efforts to widen participation. For example, the Brough unit has good links with schools. Throughout the business units, there are arrangements for 'work ambassadors' from the apprentice group to promote engineering as a career to school students. Of the 37 learners on the business administration programme, 19 are women.

60. Suitable data is collected and analysed to inform decision-making. Realistic but challenging targets are set to widen participation and they are regularly monitored at business unit and corporate levels.

61. Staff training in equality of opportunity and diversity is satisfactory. Supervisors associated with learners have recently undergone training or have it scheduled as part of their personal development programme.

62. Physical access to on-the-job training areas is generally satisfactory in the context of engineering industry working practice. Much of the practical work in the marine and aircraft manufacturing and assembly areas requires learners to be able to climb structures, work in confined spaces and work safely at heights. The company places a high priority on the management of the risks associated with these activities and the health and safety of all of its employees. Learners have the importance of safe working practices instilled effectively at induction and reinforced throughout their training.

Quality assurance**Contributory grade 3**

63. Quality assurance of the training programmes is satisfactory. BAE Systems' business units have appropriate policies and procedures which contribute satisfactorily to continuous improvement. Procedures vary in their application and effectiveness between business units. The company is currently developing an overall corporate quality assurance system, but this has not been fully implemented.

64. The collection of feedback is satisfactory. All learners have a three-monthly review where their progress is monitored and recorded. Learners have a useful opportunity to reflect and feed back information about their training, although the questions asked do not provide sufficient prompts to gain the most pertinent information. Apprentice forums take place regularly, and reports from these forums are considered by the programme teams. In most business units, learners provide good, structured evaluation of work placements. In some cases, these are particularly thoughtful and clearly expressed. BAE Systems is also involved in the piloting of an independent national online learner questionnaire for trainers in the engineering industry. Results from the first cycle of this have been effectively incorporated into the internal review process of some business units.

65. Data is collected and used satisfactorily to suggest improvements in most business units. A suitable online management information system is readily available, and most business units make effective use of the range of data collected and analysed. However, data is not used sufficiently at Basildon and Rochester to contribute to improvements. Regular and systematic audits are conducted at all business units, and the results are reviewed effectively at business unit and corporate level.

66. BAE Systems' most recent corporate self-assessment report was published in August 2004. The report used information from internal reviews conducted at most business units. Some business units, for example Barrow-in-Furness, Brough, Rochester, and Basildon, produced comprehensive and effective internal reviews. However, the overall self-assessment report is not detailed enough and does not differentiate sufficiently between the relative strengths and weaknesses of the provision. The report was of limited use to inspectors in evaluating the provision. Some of the strengths and weaknesses identified by the inspection team were identified in the self-assessment report. Inspectors agreed with three of the five self-assessment grades. All training centres have developed suitable action plans, linked to overall corporate objectives, which are regularly monitored.

67. Some of BAE Systems' quality assurance is weak. In the northwest aviation business unit there is only limited monitoring of assessment. There are no meetings to standardise assessment decisions. At Basildon, internal verification is not planned sufficiently. There is no observation of assessment. Although internal assessment at Brough is judged overall to be satisfactory, internal verification opportunities are not planned sufficiently during the year. In the business administration programme, internal verification does not conform to joint awarding body guidance. Assessors' assessments are not recorded. BAE Systems is aware of these issues and has taken action to resolve them. Neither on- nor off-the-job teaching and learning are observed systematically. At some training

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centres, for example Barrow-in-Furness, the company has access to the results of observations carried out by the local colleges as part of their own quality assurance procedures. At Brough, this is not the case. However, most senior business unit managers are strongly committed to resolving problems relating to the quality of training offered to their learners. BAE Systems has recognised this weakness and has trained staff at all business units to carry out the observation of training.

AREAS OF LEARNING

Engineering, technology & manufacturing

Engineering, technology & manufacturing		2
Contributory areas:	Number of learners	Contributory grade
Other contributory areas - Work-based learning for young people	703	2

Other contributory areas

Strengths

- very good retention and achievement rates
- good achievement of additional qualifications
- good development of skills
- good standard of training
- good progression into employment
- very effective support for learners
- good induction for aeronautical and avionics learners
- good enrichment activities
- good links with external organisations
- well-managed training

Weaknesses

- inadequate arrangements for additional learning support needs
- insufficient on-the-job assessment by direct observation
- weak internal verification processes at Basildon and Preston
- weak short- and medium-term target-setting for marine learners

Achievement and standards

68. Retention rates are very good. The retention rate for the 380 advanced modern apprentices who started during the period 1999-2001 is 88 per cent. Of the 790 advanced modern apprentices starting since 2001, 84 per cent are still in training and a further 6 per cent have completed their modern apprenticeship frameworks. Framework completion rates are very good: 90 per cent of the 174 learners starting in 1999-2000 have completed their frameworks, 66 per cent of the 206 starters in 2000-01 have done so, and a further 20 per cent are still in training.

69. In addition to meeting the requirements of their advanced modern apprenticeship frameworks successfully, learners complete a wide range of additional training programmes and qualifications. All learners complete the wider key skills programme, and a high proportion progress from achieving their technical certificates to completing

higher national certificates and other qualifications. A significant number are sponsored through university to complete engineering degrees. All learners complete a range of additional, vocational training programmes. For aeronautical learners, for example, these include cockpit awareness, foreign object damage awareness, aeronautical knowledge and a personal development programme.

70. Learners develop very good levels of skill. In addition to developing the broad-based skills required by the modern apprenticeship framework and the NVQ at level 2, initial off-the-job training also introduces learners to company-specific manufacturing processes and components. On completing their off-the-job training, learners rapidly develop high-level skills, and are able to work to exacting standards. They are encouraged to take responsibility for their work and, although well supported, learners are encouraged to work independently at an early stage in their training. Learners are expected and trusted to work with high levels of skill and integrity in safety-critical areas such as the nuclear reactor bays in submarines and the flight control systems of aircraft.

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

LSC funded work-based learning																	
Advanced apprenticeships	2004-05		2003-04		2002-03		2001-02		2000-01		1999-2000						
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
	Number of starts	137		145		218		290		206		174					
Retained*	0		0		1		49		177		156	90					
Successfully completed	0		0		1		49		135		156	90					
Still in learning	137		136		194		194		42		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

Quality of education and training

71. Training is good throughout the modern apprenticeship, with the initial training being particularly effective. Initial training focuses on developing industry-specific skills. This prepares learners well for carrying out active roles in the workplace at an early stage of their programmes. There are detailed schemes of work, lesson plans and learners' task sheets. The arrangements for the development and delivery of key skills are good in on- and off-the-job training. On-the-job training offers a wide range of interesting, challenging and extended skill-development opportunities that are highly valued by the learners. Learners are encouraged into additional training, with most holding secondary qualifications in subjects such as first aid, health and safety, lift truck, cranes, slinging and other work-related skills. Learners work with high-quality state-of-the-art tools and equipment to exacting performance and quality standards. They are managed and supported by appropriately qualified teams of staff. Most learners have, in addition to their workplace team leaders, a dedicated journeyman who provides individual teaching,

tuition and support. Significant numbers of past apprentices are participating in higher education and many occupy positions of management responsibility within the various business units.

72. Learners progress well into employment and posts of responsibility. Most learners progress from training contracts to permanent employment when they complete their apprenticeships. At Brough, for example, 144 learners completed their apprenticeships between 1997 and 2001. Eighty-three per cent of these learners gained full-time jobs and 72 per cent have remained employed, despite two periods of redundancies.

73. Learners benefit greatly from the very effective support they receive from all levels within the company. Senior managers and directors take a keen interest, actively participating in special events to celebrate achievements. Training co-ordinators visit work placements and formally review learners every 12 weeks. The learners are visited every two to three weeks for more informal and pastoral support. Lines of communication are very clear to learners, who show a very good understanding of appeals, grievance, equality and diversity procedures; these are reinforced well during progress reviews. Personal issues are dealt with sensitively during reviews. Learners have access to trained workplace counsellors qualified in occupational welfare and counselling skills. Learners work with skilled workers, some of whom have attended special coaching courses.

74. The induction programme for aeronautical learners is particularly thorough. The first three weeks of training are dedicated to providing all the modern apprenticeship information. A well-planned and interesting timetable of lessons and events provides learners with the opportunity to absorb the complex requirements of the aeronautical training programme. Learners are split into groups of 10 to 12, a main objective of the programme being to encourage team working from day one. Formal training is delivered for manual handling techniques and fire awareness. Learners carry out an evaluation of the induction at appropriate stages and the teams discuss their findings. Attention to health and safety is particularly rigorous. A broad range of relevant health and safety topics are covered, which prepares learners effectively for the workplace. A further three days of certificated training are delivered on the prevention of accidents. Key skills and practical aspects of training are introduced in the second week of induction. Equality of opportunity and diversity sessions are well planned and professionally delivered. Learners who are well into their programmes successfully recall induction subject matter. On allocation to each new placement a very thorough 'mini induction' is completed, which informs the learner about any specialist information about the department.

75. The company provides and supports a very extensive range of enrichment activities for its learners. Learners participate fully in the various programmes and highly value the opportunities they provide for personal and career development. The comprehensive list of activities includes initial outdoor leadership courses, international exchange visits, community projects to support disadvantaged groups, and a company-wide charity challenge. Additional training is provided for learners to obtain certificated qualifications in first-aid, health and safety, computer skills, the use of spreadsheets and project management skills. All learners are eligible to participate in the company's programme of

assisted self-study which provides £100 to support additional training courses.

76. The company has good links with external organisations that are very effective in recruitment and developing learners' personal skills. Many school links are aimed at widening participation by under-represented groups and raising the profile of engineering. The company is involved in sponsoring a challenge to secondary schools, to design a formula one racing car using CAD/CAM software, or to build and test fly their own model aircraft. Some learners, men and women, have the role of school ambassadors, visiting schools to offer advice and practical help to students. Other learners act as guides, escorting visitors around the company, or as hosting delegates at the company's exhibition stands. Learners are selected on merit for these duties.

77. BAE Systems has two sites with centre of vocational excellence (CoVE) status, Barrow-in-Furness and Preston. Barrow-in-Furness has a strategic partnership with the local further education college subcontractor. The Preston training centre achieved full CoVE status in July 2004 and is one of the first group of CoVE extension pathfinders. The CoVE steering groups meet regularly and include representatives from key stakeholders. The principle areas of improvement for the CoVEs have been in the areas of apprentice programme development, staff development and college facilities. The key objective is to develop a more effective transition for learners from the foundation programme to their work placements.

78. BAE Systems' arrangements for identifying learners with additional learning support needs are inadequate at some locations. The company has a very thorough process for testing the aptitude and suitability of potential entrants to the apprenticeship programmes. However, the recruitment tests do not assess levels of competence in literacy and numeracy, and there are no company-wide arrangements for diagnostic testing of these or other additional learning needs. Learners with good GCSE grades, are recruited, typically those with three to five subjects at grades A to C, including mathematics, English and a science subject for the technician programmes, or grades A to E for the craft programmes. The company relies on the GCSE grades and its own recruitment tests to provide sufficient evidence to identify the support needs of learners. The effectiveness of the use of this information varies significantly between sites. At Barrow-in-Furness, the arrangements for diagnostic testing are satisfactory and appropriate support is provided by the subcontracting college for those who need it. However, available information is not used to co-ordinate the support for learners. For example, one learner was identified as having dyslexia; this information was not used to develop his individual learning plan and no additional support has been identified or provided by the company. At college his dyslexia was identified and appropriate support was provided during his initial training. Staff responsible for his workplace training are not aware of his needs and have no strategy or arrangements in place to support him.

79. At Preston, there is no diagnostic testing for literacy and numeracy abilities and there is an assumption that the high entry standard of learners means that they will have no support needs. The college offers no formal support arrangements other than evening tutorials, which are poorly attended. Fundamental errors in learners' written work, including presentations to external agencies, are not corrected for grammar or spelling.

However, whenever learners are identified as needing additional help, the company provides the appropriate support through the local college of further education. The company does not have a fully operational written strategy or plan for the implementation of literacy, numeracy and language support, and produces no written reports about the effectiveness of the support provided. The company has produced a comprehensive and detailed literacy and numeracy skills strategy, which was being introduced to all sites at the time of inspection.

80. None of the sites has sufficient on-the-job assessment by direct observation. Assessors rely heavily on witness testimonies and supporting documentary evidence when making assessment decisions. The planning of assessment opportunities is weak at a number of sites. Often the planning of assessment is over-dependent on learners identifying the assessment opportunities themselves. The company has recognised this shortcoming, but measures to improve the process have not been fully implemented.

81. The internal verification process is weak at a number of sites, in particular the three sites in the Preston area and those at Woodford and Basildon. Internal verification is only carried out at the end of the programmes. Internal verifiers carry out only a few direct observations of assessment. Internal verifiers rely too much on sampling learners' portfolios and their written work. Assessors and internal verifiers do not meet frequently enough on a formal basis to discuss issues or to share good practice. There are no formal standardisation activities to ensure consistency of assessment practice. Feedback given to assessors about their performance is not sufficiently detailed to enable them to improve. Insufficient support or priority is given to newly appointed assessors. Sampling plans are not used enough to ensure that all units and assessors are checked in accordance with awarding body requirements.

82. The short- and medium-term target-setting for marine engineering learners at Barrow-in-Furness is weak. Targets set in the learners' individual learning plans and at progress reviews are vague and do not clearly specify meaningful objectives to give learners sufficient guidance or direction. Learners do not have a written on-the-job learning plan, but rely on the informal arrangements of the training co-ordinator. The process is very reactive and not linked to a structured plan. New arrangements have been devised for the most recent intake of starters but have not been implemented.

Leadership and management

83. Training on all sites is well managed and levels of achievement are very good. Managers have good relationships with team leaders who provide the work placements, and with subcontractors that provide off-the-job training. Learners experience a broad range of work placements during their apprenticeships and managers make good use of the excellent opportunities for on-the-job training. Movement between work placements is well planned and managed effectively. When one placement is unable to offer the required experience, learners are quickly moved to another. For example, one learner who could not complete his NVQ competences while working in the new Joint Strike Fighter section at the Samlesbury site was temporarily transferred to work on the Eurofighter section to satisfy NVQ requirements.

84. Staff responsible for time-keeping, attendance, arranging work placements and supporting learners work effectively together. Reports are produced quickly to alert managers to any problems. Key skills training is well managed on most sites and most learners gain key skills early in the programme. However, key skills training has been introduced late, towards the end of programmes for some learners at the Preston site. A few learners have not begun key skills training until their final work placement in the final year of their programme.

85. Those involved in managing learners work well together and communications are effective. Subcontracting arrangements with colleges are strong and effective, and there are appropriate service level agreements. In many cases, BAE Systems' working relationship with colleges is better described as a partnership. The recruitment process is thorough and fair. Data is used appropriately in local management decisions.

Business administration, management & professional

Business administration, management & professional		2
Contributory areas:	Number of learners	Contributory grade
Business administration - Work-based learning for young people	37	2

Business administration

Strengths

- very good retention and achievement rates
- good mainstream and enhanced training
- very effective work-placement practice
- good resources

Weaknesses

- poor internal verification practice

Achievement and standards

86. Achievement and retention rates are very good. For learners starting the programme in 1999-2000, both the achievement and the retention rates were 85 per cent. Achievement and retention rates for learners starting in 2000-01 were both 92 per cent. No learners were recruited to the programme during the year 2001-02. Of the 46 learners who started in the period 2002-04, 11 have successfully completed the modern apprenticeship framework and a further 32 are still on the programme. The five learners who started in 2004-05 are still in training.

87. The achievement rate for the technical certificate is very good; 95 per cent of the 46 learners starting in 2002-03 and 2003-04 have completed both parts of the technical certificate successfully.

88. The standard of work produced by learners in their work placements is good. Learners are able to use a wide range of product evidence, such as minutes of meetings, production schedules, project documents and e-mails from their placements to meet the requirements of the NVQ and key skills units. Good witness testimonies are provided by work-placement supervisors. Evidence is clearly recorded and cross-referenced to performance criteria in the national standards, where appropriate. Portfolios and workbooks are of a good standard with a comprehensive range of workplace evidence.

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

LSC funded work-based learning																	
Advanced apprenticeships	2004-05		2003-04		2002-03		2000-01		1999-2000								
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
	Number of starts	5		23		23		13		13							
Retained*	0		0		11		12	92	11	85							
Successfully completed	0		0		11		12	92	11	85							
Still in learning	5		21		11		0	0	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

Quality of education and training

89. On- and off-the-job training are good. Learners attend a local college of further education for one day each week during the first year of their programmes. Training at the college prepares learners for the technical certificate. Learners also develop skills in IT and project management. Learners complete an examination-based qualification in IT and use this to support their key skills in IT. Training sessions are carefully prepared and delivered by well-qualified staff. BAE Systems has a very good range of additional training and enrichment activities. Additional training prepares learners well for their work placements and enables them to develop the skills and competences needed to make successful careers in the company. All learners have the opportunity to attend a residential outdoor leadership and team-building programme. This course is highly valued by learners. One learner interviewed said that she went on the outdoor programme as an individual and came back as a member of a team. Learners also participate in community programmes, careers events and a company-wide charity challenge sponsored by BAE Systems. These activities are used successfully to develop learners' personal skills and as sources of evidence for key skills units.

90. The company's arrangements for managing the learners' work placements are very effective and successful. Placements are well designed to prepare learners for a career in BAE Systems and are intended to provide them with an insight to a range of company activities before their first appointment in the company. Placements offer learners a wide range of appropriate training opportunities. These include health and safety, project management, presentation skills, planning awareness, and updating in a number of software packages relevant to their job roles. All learners have the opportunity to experience up to five placements during the period of their apprenticeship. Placement opportunities include project management, customer support and services, strategic procurement, and logistics. Through the programme manager, learners have the opportunity to express their work-placement preferences. Placements provide learners with the opportunity to develop personal confidence and employability skills, such as time management and working with other people.

91. Learning resources are good, both in-company and at the subcontracting college. In the workplace, learners use the company's extensive range of modern business and IT resources as a normal part of their work activities. At each site, learners have access to a learning centre staffed by a full-time learning professional. A wide range of up-to-date training packages are available to learners. Many of the learning packages are available through a virtual university online learning facility. Access to IT terminals is good at all learning centres. Individual work stations are linked to the virtual university's learning online facility. Learners who attend the subcontracting college for training are encouraged to use the college's library and IT resources. A link developed with a local university enables learners to use the university's library and learning resources. Training staff have appropriate qualifications and experience and are encouraged and supported to update their subject knowledge and experience, including assessor and verification qualifications.

92. Initial assessment is satisfactory. All learners complete an assessment of literacy and numeracy skills. The company sets a high standard for recruitment and most learners do not need additional support. At the time of inspection, the company did not have a formal procedure to provide additional support in numeracy and literacy. However, whenever a need has been identified, learners have been supported through the local college of further education. The company has produced a comprehensive and detailed literacy and numeracy strategy which was being introduced to all sites at the time of the inspection.

93. Assessment of learners' work was delayed during the year 2003-04 and the measures taken to bring the programme back on schedule are still in progress. Assessors plan to visit learners in their work placements every four to six weeks to plan assessment and agree targets. However, the administration team is small. Staff absences during 2004 reduced the number of completed assessments of learners' work. Two learners, who joined the programme in September 2003, have had a first assessment visit in September 2004.

94. Progress review practice is satisfactory. Learners are visited by training staff in their placements every 12 weeks to review progress. Learners' progress towards agreed targets is monitored and revised as necessary. Learners' understanding of equal opportunities is checked at each review.

95. Internal verification practice is poor. It does not fully meet guidelines on internal verification provided by the awarding body. Assessors' judgements are only sampled at the end of each programme. Written feedback is provided to assessors at this stage. There is no observation of assessors in the workplace. At the time of the inspection, none of the portfolios from the 2003-04 intake of learners has been internally verified. Management are aware of this weakness and an action plan to resolve it has been drawn up.

Leadership and management

96. Internal communications are good work-placement supervisors and training staff have a good, shared understanding of the requirements of the programme. Learners feel well supported and are enthusiastic about their programmes. Management is responsive to issues affecting training outcomes. A decision to change the provider of off-the-job training has proved very successful. The subcontractual agreement arising from this change is monitored effectively. Some delays have occurred in ensuring that all assessor staff are fully qualified. Measures to cover for lengthy periods of staff absence have not always been successful.