



Education and Training
Inspectorate

ApprenticeshipsNI Provision in
Bombardier Aerospace, Belfast

Report of an Inspection
in October 2011



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A number of quantitative terms are used in the report. In percentages, the terms correspond as follows:

More than 90%	-	almost/nearly all
75% - 90%	-	most
50% - 74%	-	a majority
30% - 49%	-	a significant minority
10% - 29%	-	a minority
Less than 10%	-	very few/a small number

All of the statistics in this report were provided by Bombardier Aerospace, Belfast

Performance Levels

The Education and Training Inspectorate use the following performance levels in reports:

Performance Level
Outstanding
Very Good
Good
Satisfactory
Inadequate
Unsatisfactory

PART ONE: SUMMARY

1. CONTEXT

1.1 Bombardier Aerospace, Belfast (Bombardier) is contracted by the Department for Employment and Learning (the Department) to provide apprenticeship training through the ApprenticeshipsNI programme. Bombardier is an international corporation involved in the engineering design and development of transportation equipment, with its headquarters in Montreal, Canada. Bombardier, Belfast, employs around 5,000 people in the design and manufacture of aircraft components and sub-assemblies.

1.2 At the time of the inspection, a total of 166 apprentices were registered on the ApprenticeshipsNI programme. Over a four year programme, all of the apprentices work towards achieving a level 3 National Vocational Qualification (NVQ) in aircraft fitting or in engineering design, along with an Edexcel technical certificate in aero engineering at level 3 or above. Where necessary, the apprentices take level 2 essential skills qualifications in literacy, numeracy and information communication technology (ICT). Almost all (93%) of the apprentices are male.

2. PROVISION

2.1 Annually, Bombardier recruits approximately 40 apprentices. Most of the apprentices meet the minimum entry criteria of two General Certificates in Secondary Education (GCSEs) passes at grade C or above in English and mathematics. Around 80% of the apprentices, on entry to the apprenticeship programme, hold at least four GCSEs at grade C or above, including English and mathematics. A further 18% hold level 2 essential skill qualifications in literacy and numeracy. A small number of adult apprentices recruited from West Belfast, who don't have any formal qualifications, have progressed from the Steps to Work initiative, 'Engineering into Employment Programme', offered at Belfast Metropolitan College.

2.2 During the first year of the apprenticeship programme all of the apprentices attend Bombardier's off-the-job training facility for four days each week to receive practical skills training. They also attend Belfast Metropolitan College one day each week to complete a technical certificate in aero engineering, at a level appropriate to their entry qualifications.

2.3 During year two, the apprentices progress to work-based training in either one of the company's various production areas, or in their design, methods, or tooling departments, where they complete the respective level 3 NVQ in either aircraft fitting or engineering design. All of the apprentices continue to attend Belfast Metropolitan College one day each week to complete their technical certificate.

3. THE INSPECTION

3.1 The Education and Training Inspectorate (the Inspectorate) carried out an inspection of the ApprenticeshipsNI programme in Bombardier in October 2011. A team of three inspectors observed a total of 64 apprentices in eleven directed training sessions, and in six workplace visits. Discussions were held with the training manager, lecturers, trainers, apprentices and workplace supervisors. The inspection team examined samples of the apprentices' practical work, portfolios of evidence, apprentices' personal training plans, the organisation's self-evaluation report, minutes of meetings, policies and other relevant documentation.

3.2 The arrangements for the inspection of care, guidance and support and the safeguarding of vulnerable groups includes the opportunity for apprentices to complete a confidential questionnaire prior to the inspection, as well as meetings by the inspection team with groups of apprentices. One hundred and fifty confidential questionnaires were issued to the apprentices: 76 (51%) of these were returned to the Inspectorate and 14 of them contained additional written comments. The returns show that almost all of the apprentices find the apprenticeship programme interesting and appropriately challenging. Almost all feel safe and secure in directed training and in the workplace, and know who to speak to if they have any concerns. The Inspectorate has reported the outcomes of the questionnaires to the manager responsible for pastoral care and safeguarding.

4. **MAIN FINDINGS**

4.1 In aero engineering, the quality of the training and pastoral care provided by Bombardier is outstanding. The organisation has demonstrated its capacity for sustained self-improvement.

4.2 The main strengths are the:

- outstanding leadership and management of the apprenticeship programme;
- excellent standards of work achieved by almost all of the apprentices;
- outstanding practical training to develop the apprentices' occupational skills;
- very good provision to develop the apprentices' technical knowledge at the most appropriate level;
- very good care, support and guidance arrangements, particularly the high levels of pastoral care;
- outstanding monitoring and reviewing of the apprentices' progress and achievements in both directed and in workplace training; and
- retention, achievement and progression rates, which are outstanding at 91%, 100% and 100% respectively.

Table of Performance Levels

Overall performance level	Outstanding
Contributory performance levels	
Leadership and Management	Outstanding
Quality of Provision for Learning	Very Good
Achievements and Standards	Outstanding

PART TWO: OVERALL QUALITY OF PROVISION

5. LEADERSHIP AND MANAGEMENT

5.1 The quality of the leadership and management, at all levels, is outstanding. The training manager and Bombardier's senior management team are committed fully to providing the highest quality of training for apprentices, and have in place robust quality assurance arrangements to maintain the high quality of the training, and the standards of the apprentices' work.

5.2 The quality assurance arrangements are very good. The quality coordinator and training manager collate and monitor regularly key performance data such as attendance, timekeeping, apprentices' progress, retention, achievement and progression rates. Through robust and regular self-evaluation and quality improvement planning, Bombardier develops continually the apprenticeship programme to ensure it meets the needs of the apprentices and those of the business. Recent improvements include a revised technical certificate curriculum, developed jointly with Belfast Metropolitan College, to ensure there is a clear progression pathway from level 2 through to level 4.

5.3 There are regular monthly team meetings between senior managers and staff from Belfast Metropolitan College, and workplace supervisors to monitor and review the apprentices' progression and achievements in their technical certificate and NVQ. While there are comprehensive minutes of the meetings with Belfast Metropolitan College containing evidence of ongoing self-evaluation and quality improvement planning, there is a need for the college to provide Bombardier with a more formal annual self-evaluation report and quality improvement plan.

5.4 All of the lecturers and trainers are appropriately qualified, with specialist skills and industry experience to support effectively the apprentices' directed training.

5.5 The quality of the training accommodation is outstanding. The apprentices are provided with a well-maintained, spacious and well-equipped practical training workshop, to support the development of their occupational skills. There is effective use of information and learning technology to enhance and support the apprentices directed training for their technical certificate. This includes a well-resourced virtual learning environment for most of the units of the technical certificate.

5.6 Bombardier, through their school liaison officer, has developed strong links with primary and secondary schools to market the apprenticeship programme, and to provide career advice and guidance to young people interested in following a career in the aerospace industry.

5.7 Bombardier has well-established policies and procedures for ensuring equality of opportunity, and a working and training environment free from harassment and intimidation.

6. ACHIEVEMENTS AND STANDARDS

6.1 The standards of almost all of the apprentices' occupational skills are outstanding. They are able to manufacture engineering components using a range of techniques and to the required high standard of the aerospace industry. The extent and standard of their technical knowledge are very good; they have a sound understanding of engineering principles, mathematics and technology to support the design and manufacture of aircraft components. All of the apprentices have a well-developed understanding of health and safety precautions and adhere well to company procedures.

6.2 The standards of most of the apprentices' numeracy, literacy and ICT skills are very good. They are able to produce neat and accurate engineering sketches and drawings, and produce concise accounts of their work. They demonstrate well-developed numeracy skills in the interpretation and use of engineering information to solve problems. They are confident in their use of word processing software, internet browsers and proprietary computer-aided design software.

6.3 Over the period 2007/08 to 2010/11, of the 201 apprentices who started the apprenticeship programme, 16 completed the programme and all of them gained the full award; the remaining 166 are still completing their four-year apprenticeship. These figures represent an outstanding retention rate of 91% and an outstanding achievement rate of 100%. The progression rate to employment within Bombardier is also outstanding at 100%.

7. QUALITY OF THE PROVISION FOR LEARNING

7.1 The overall quality of the training provision is very good. There is a well-planned training programme to develop the apprentices' practical skills, technical knowledge and their workplace occupational skills.

7.2 The quality of the off-the-job practical skills training is outstanding. It is thoroughly planned, providing the apprentices with excellent opportunities to develop their skills in reading and interpreting drawings, accurately mark-out dimensions, and using tools and equipment to manufacture engineering components to industry standards.

7.3 The quality of the directed training provided by Belfast Metropolitan College is very good. There is a coherent programme of technician engineering qualifications from level 2 to level 4, which allows the apprentices to commence at the most appropriate level, based on their entry qualifications. The range of qualifications include an Edexcel level 2 First Diploma, level 3 National Certificate, and level 4 Higher National Certificate in Aero Engineering. Within each of these qualifications, there is a well-balanced range of units, including theory of flight, engineering communication, engineering science, mathematics, workshop principles, pneumatics and hydraulics.

7.4 The quality of the directed training observed ranges from satisfactory to outstanding, with most (82%) of the sessions being very good or outstanding. The sessions are well-planned; the lecturers and trainers use a good range of teaching approaches to engage and support the apprentices in their learning. Assessment is well-planned and the apprentices are provided with good feedback on their performance and what they need to do to improve.

7.5 The quality of the training in the workplace is outstanding. The apprentices are provided with the opportunity to move around various production and technical areas to ensure they develop a broad range of manufacturing and engineering design skills and knowledge. Workplace assessment is regular, and an extensive range of assessment evidence is presented clearly within the apprentices' log books; the log books include regular feedback from their NVQ assessor and workplace mentor.

7.6 The quality of the apprentices' personal training plans is good. They contain relevant generic information regarding the apprentice's training, but contain insufficient personal information to identify fully any barriers to learning. Monitoring and tracking of the apprentices' progress is outstanding. Every month the training staff and workplace supervisors provide detailed reports on their progress, achievements and attitude to training, which are used to provide the apprentices with constructive and supportive feedback through one to one interviews.

7.7 The quality of the pastoral care is very good. There are transparent and supportive learning arrangements to ensure all apprentices make good progress and successfully complete all aspects of their apprenticeship. Through the robust recording and reviewing arrangements, the training manager monitors closely the progress of each apprentice across all aspects of their programme, and provides tailored solutions for those apprentices requiring extra support. There is a need, however, to make more use of initial assessment to identify those apprentices with limited confidence in mathematics and to provide them with the most appropriate and timely additional support.

7.8 The quality of the careers education, information, advice and guidance is very good. The apprentices are provided with outstanding opportunities to develop high quality and transferable occupational and personal skills, which are accredited through nationally recognised qualifications. Although the apprentices are apprised regularly of career opportunities within Bombardier, there is a need to enhance their understanding of future education and career opportunities within engineering in a broader sense.

7.9 While the arrangements for safeguarding vulnerable groups comply satisfactorily with the Safeguarding Vulnerable Groups (NI) Order 2007, the management of Bombardier needs to update their safeguarding policies to reflect current legislation and to share, where appropriate, their policy on safeguarding with the apprentices' parents, and to update training for relevant managers.

PART THREE: CONCLUSION AND KEY PRIORITIES FOR DEVELOPMENT

8. CONCLUSION

8.1 Overall, the quality of training provided by Bombardier is outstanding. The training and pastoral needs of the apprentices are being met very well. The Inspectorate has confidence in Bombardier's capacity for sustained self-improvement.

OVERALL SUMMARY TABLE – 2007- 2011

Programme/Strand	Numbers registered who completed 4 weeks training	Retention rate %	Achievement rate %	Progression rate to FE/other training %	Progression to relevant employment
Apprenticeship	201	91%	100%		100%

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