



SCOTTISH INSTITUTE
OF SPORT



ANNUAL REPORT 2004-05

coaching

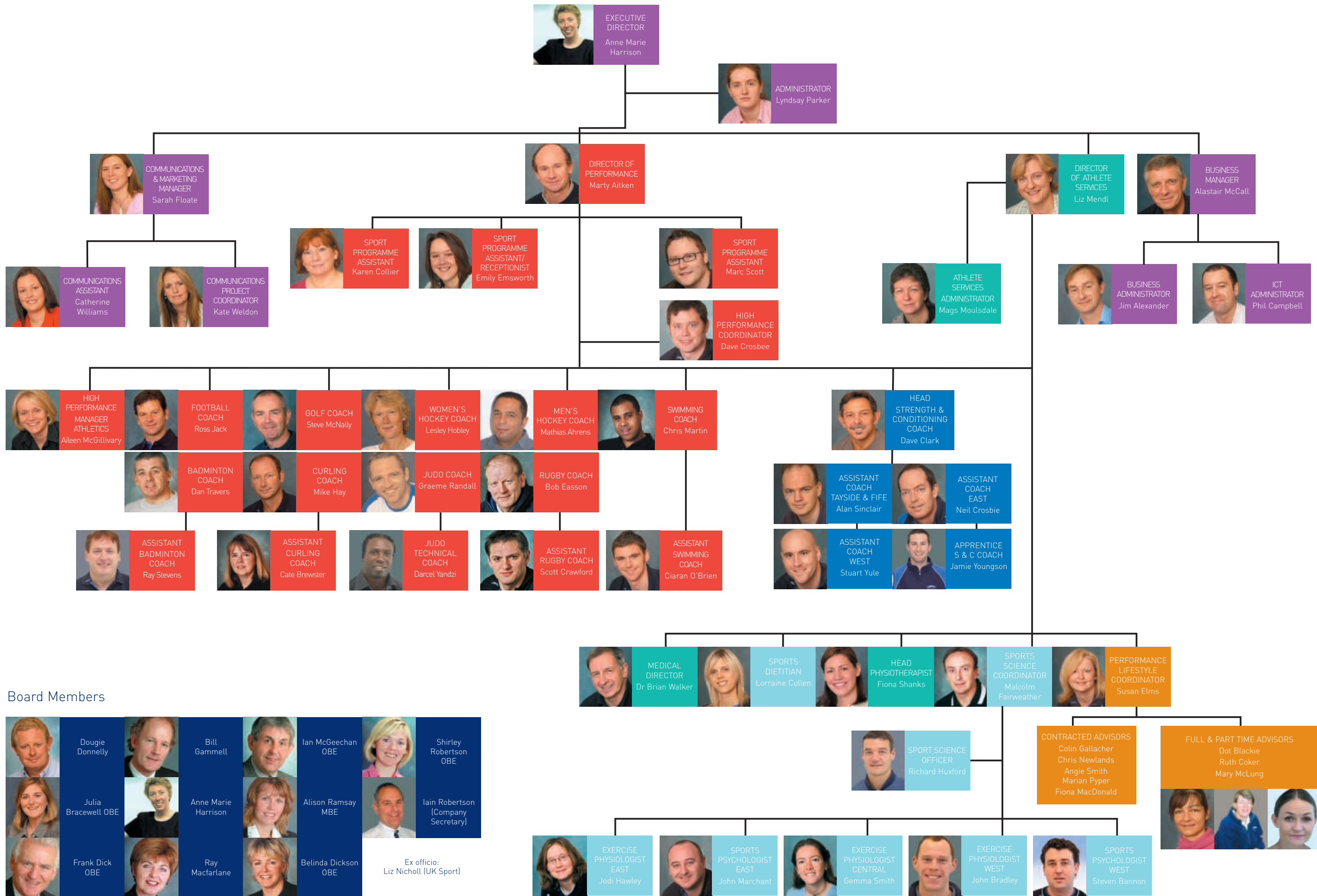
sports medicine

sports science

performance lifestyle

strength & conditioning

staff



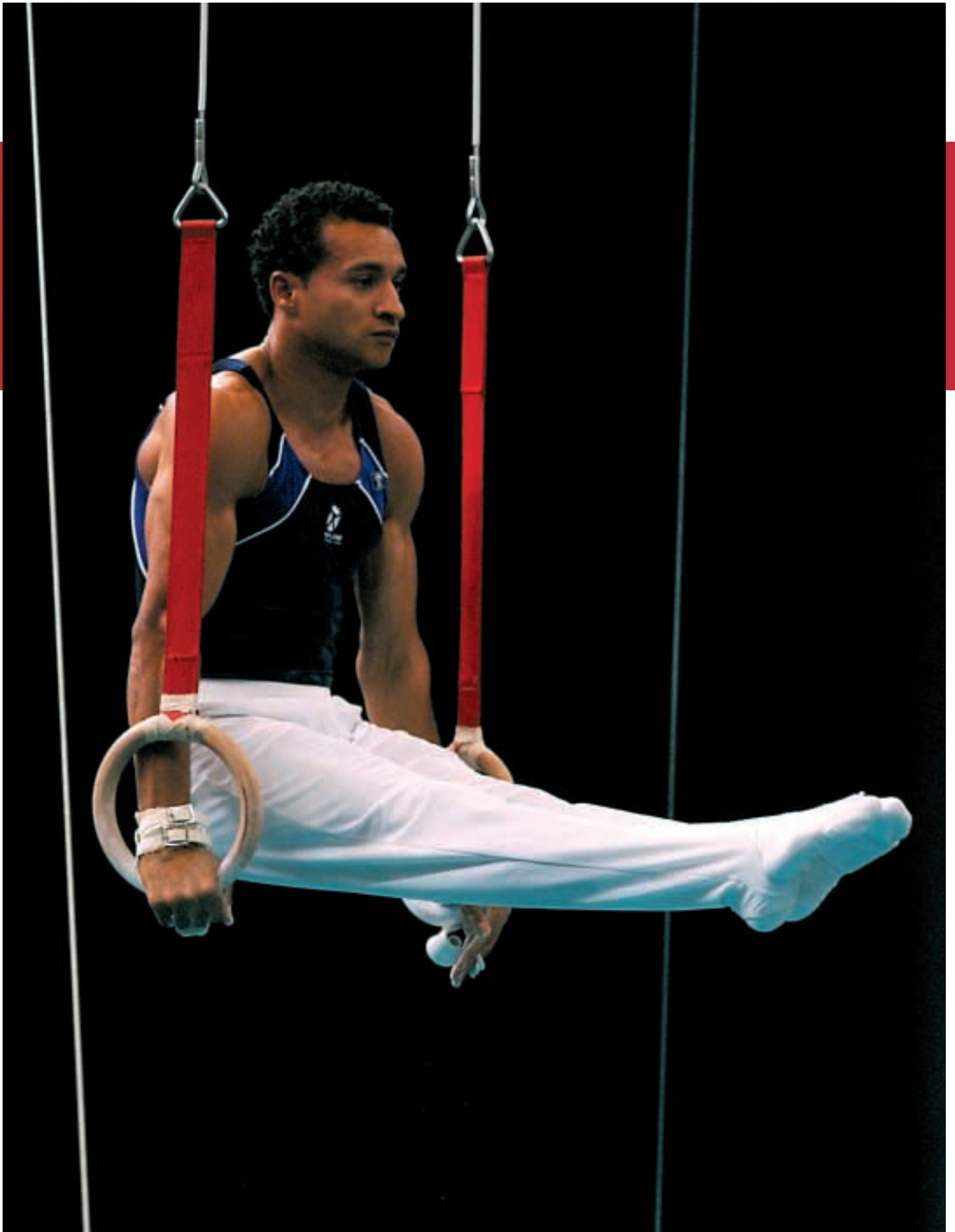
Board Members



Contents

- 3 Chairman's report
- 4 Executive Director's report
- 6 The preparation of winners
- 12 The performance of winners
- 22 Financial accounts

innovation integration



Steven Frew

Institute gymnast Steven Frew preparing for Melbourne 2006.

Chairman's Report

A redoubling of our efforts

After more than 20 years' experience of commentating and reporting on Scottish athletes' fortunes at national and international level, it is a pleasure and privilege to now find myself at the helm of the Scottish Institute of Sport.



For much of the year under review in the annual report, of course, the Institute was led by my predecessor Alistair Gray.

So let me begin by recording my thanks and my respect for Alistair's work. As Chairman, he did much to shape the concept, style and delivery of the Institute's work. More significantly perhaps, it seems to me that he established a sense of purpose and a positive culture for the Institute. This is best demonstrated by his strong belief that Scottish athletes and coaches have all too often limited their ambition to becoming the best in their country or, if really pushed, best in the United Kingdom. 'Not good enough' was Alistair's cry. We must strive for world-class performance and world-class results. Only by getting into this mindset – and believing that we can achieve at this level – will the results for which we all yearn be forthcoming. It is a theme that I recognise well and one which I aim to develop in my period as Chairman.

Expertise and vision

If that happens, I know already that much of the responsibility will be down to the expertise and the vision of the team at the Institute. In my professional capacity, I was aware of the work of the Executive Director, Anne Marie Harrison, and her colleagues here. But my new involvement has given me the opportunity to see two things in some detail: first, the breadth of skills – from coaching and strength and conditioning to sports medicine, science, and performance lifestyle advice – which are being made available to our athletes; and secondly the resolve of the staff here to reach new frontiers and to establish a position for the Institute at the very forefront of international expertise.

This is a powerful combination. A range of top-class skills complemented by fierce ambition. Harnessing these qualities paved the way to successes over the past 12 months – from Olympic, Paralympic, and World Championships medal-winning performances to more recent achievements in sports such as curling and judo.

At this early stage of my Chairmanship, I know that there is much to commend and I am delighted to have the chance to do so.

They include:

- world-class performances by the athletes and the team here which has prepared and supported them
- the dedication to a way of working at the Institute which ensures that the athletes are treated as individuals requiring specific attention and service
- the commitment to working closely with other key figures and organisations (personal coaches, Area Institutes of Sport, governing bodies of sport, and others) in any athlete's development
- the innovation demonstrated by the specialists in so many areas of the Institute's work.

I have also been very impressed with the co-operation of our many partners in the business of creating winners for Scottish sport, and I look forward to working with them in the future. This includes those at **sportscotland** and the Scottish Executive who provide both the financial backing and the overall ambition and will for our nation which informs much of our own vision.

Looking forward

In this report, we look back over the past 12 months, and I hope that you will enjoy reading about this period. But the Institute is always looking forward – assessing its past performance, learning from this, setting new targets, and re-affirming its ambitions for our athletes.

With a new Chairman in post, it is inevitable that people will look on this coming period as a new phase in the Institute's development. We have achieved a great deal in the last six years, but much remains to be done. The twin incentives of a London Olympics in 2012 and a possible Glasgow Commonwealth Games in 2014 are thrilling prospects for all of us in Scottish sport.

All of us at the Institute will be redoubling our efforts to give our sportsmen and women every possible chance to produce their greatest performance on the biggest stages.

Dogie Donnelly
Chairman

Executive Director's Report



Reflections

This time last year we were reflecting on the Olympic and Paralympic Games and what fantastic events they were both in terms of organisation and the success of Team GB. So it is appropriate that some of this report is dedicated to particularly those great Scottish athletes who performed with such distinction.

Some 21 Institute athletes were selected for the Olympic Games with Scotland's highest representation for many years in Swimming, Track & Field and Hockey. Of course history records that Scottish athletes contributed four medals (14%) to Team GB's total of 30. Who could forget the achievement of Chris Hoy watching the sea level world record being broken by three cyclists before him and knowing that as the last rider away he had it all to do just to win a medal and in a display of speed, power, composure and belief he finished on top of the podium by .185th second! Katherine Grainger in the women's rowing pair and Campbell Walsh in the canoe slalom K1 returned with silver medals and of course we shared the pride of our Board Member Shirley Robertson's consecutive gold medal in sailing, this time in the Yngling class.

Nine Institute athletes were selected for the Paralympics and returned with 14 medals from seven medallists. The highlight of course was swimmer Jim Anderson's outstanding efforts in securing four gold medals, resulting in him being named the BBC Scotland Sports Personality of the Year. Also in the pool, Maggie McEleney and Andrew Lindsay followed up their gold medal successes in Sydney with further golds in Athens.

Looking ahead

However, the Scottish Institute of Sport must always be looking forward and even before the Closing Ceremonies for the above Games had concluded, our plans and preparations for the Olympic and Paralympic Winter Games (where Wheelchair Curling is on the programme for the first time) in Turin and Commonwealth Games in Melbourne were well under way. They have been detailed, analysed and refined regularly over the last 12 months and will continue to be over the few months ahead.

Quality of people

In addition to identifying and working with talented athletes, our contribution comes mainly from the quality of personnel we are able to assemble through our staff and support providers, and in this regard we have been most fortunate to attract or develop some of the best. Following the completion of his duties as Head Coach for GB Women's Rowing at the Athens Olympics, Marty Aitken joined us as Director of Performance responsible for the Core Sport Programmes. In this key role, Marty has provided an injection of new thinking, is challenging and supporting the coaches, and has a track record of knowing how to win and how to get there, which will be an asset to the Institute.

Our Medical Director, Dr Brian Walker, was honoured with the "Robert Atkins Award" from the Institute of Sports Medicine for his exceptional services to sport; how fortunate Scottish athletes are to have the benefit of his wisdom, knowledge and experience.

Our Coaching Team has been enhanced with the appointment of Mathias Ahrens as the Performance/National Men's Hockey Coach and Lesley Hobley as the Performance/National Women's Hockey Coach, along with Assistant Swimming Coach, Ciaran O'Brien and Strength and Conditioning Apprentice Coach, Jamie Youngson. The last two have been appointed with the support of UK Sport through their Elite Coach and Internship programmes. We were also delighted when, following an international recruitment process, Aileen McGillivray was appointed as the High Performance Manager for Athletics. Aileen, a past Scottish sprint champion, is also a "graduate" of our Apprentice Coach Programme.

Completing our team, in partnership with the West of Scotland Institute of Sport, was the appointment of Sports Psychologist, Steve Bannon (from the South Australian Institute of Sport) and Exercise Physiologist, Dr John Bradley.

Recognition

The Institute works to be at the cutting edge of performance sport and unashamedly seeks the recognition of our colleagues throughout GB and internationally as a measure of our achievements. I am proud of the demands and requests that are placed on many of our staff to contribute to GB World Class Performance Plans, and to present at international conferences, together with our ability to attract world leading experts to Scotland to support our athletes and coaches and the number of visits by international colleagues seeking our experiences and knowledge.

Integration in action

Our quest to constantly seek the holy grail and work effectively in multi disciplinary teams integrating with athletes' programmes is demonstrated through our Annual Support Team Conference which in 2004 attracted 90 staff and providers to a full day: sharing learning, team building, innovation and a commitment to ensuring no stone is left unturned in supporting athletes to achieve their potential. The opportunity for personal coaches to attend was a welcome extension to this important event on our calendar.

Andrew Murray

Enjoyed his first senior debut at the US Open.

Lesley McKenna

Half-pipe snowboarder, prepares for Turin.

**Our athletes achieving**

Last year I spoke about the "impact of success" and in addition to our Olympic/Paralympic performances mentioned earlier, I wish to acknowledge the talents of Chris Cusiter, who has the distinction of being the first Institute Rugby player to be selected for the British and Irish Lions; emerging tennis star, Andrew Murray, who is making the transition from the junior ranks to the senior circuit with some very promising results and made a most impressive debut for GB in the Davis Cup; Dave Murdoch and his rink's silver medal at the Men's Curling World Championships in Canada; Euan Burton's bronze medal in the European Judo Championships; and note that Scotland finished the international badminton season with three female players ranked in the top 25 in the world: Susan Hughes – 22nd (singles) and Kirsteen McEwan Miller/Yuan Wemyss – 23rd (ladies doubles). Incidentally, Susan and Yuan finished number 1 and 2 in the European singles rankings. These athletes serve as a valuable reminder of what can be achieved by Scots against the best the world has to offer.

Farewells

As this report is going to print, we have sadly bid farewell to our High Performance Judo Coach, Nigel Donohue, who accepted a role with his old club in England preparing the next generation of players, with an eye on London 2012. Nigel in his five years as firstly National Coach for JudoScotland and as Institute Coach has overseen a most successful programme which has supported four Olympians, a World Champion, two European medallists and 10 Commonwealth Games medallists. Whilst we offer our best wishes for his future challenges, his talent, dedication and capacity as a Coach and Performance Director were indeed world class and will be missed.

This year we have also bid farewell to our inaugural Chairman, Alistair Gray. It is appropriate on behalf of the Board, staff, athletes and Scottish sport that I acknowledge the contribution he has made. From the outset Alistair made it his personal crusade to place Scottish sport on the world stage, to develop Great Scots and release the Scottish spirit. His mantra has been "attitude, ambition and self belief" for the Institute, athletes and their coaches. This remains as relevant today as it did six years ago and we continue to "chip away" at this critical culture change, while delivering programmes and services to our current athletes. On a personal level, Alistair, thank you for the unique privilege of being your Executive Director. It is a journey that has been so fantastic; I should have paid you to take it!

A new era

We have been most fortunate that Dougie Donnelly has accepted the challenge and privilege of leading the Institute into our next exciting phase. Dougie is one of the BBC's top television sports presenters with over 20 years' experience and brings that perspective, together with his law degree and a passion for Scottish success, which we all look forward to sharing with him over the ensuing years.

A great year?

So in looking forward, what would be a great year for the Institute?

- Preparing for 2006 success:
 - The right athletes
 - The right preparation
 - Achieving our targets.
- Getting the basics right! It is no good providing the added extras if the foundations and fundamentals are not sound and this applies equally to the operation of the business and the preparation of our athletes.
- Consolidation of technical staff leading to real integration and multi disciplinary programmes having a performance impact.
- Moving ideas and innovation into action, measurable improvement and results.
- Really positive progress in golf and football.
- Sowing the seeds for 2007 and beyond.

The future for performance sport, athletes and coaches in Scotland is very exciting with London's successful bid to host the 2012 Olympic Games and the announcement that Glasgow will bid for the 2014 Commonwealth Games. The opportunities abound, our planning has begun. However, hard work is the key ingredient where we cannot cut corners and so we must ask the question, do we know what our competitors are doing and are we doing it better?

Anne Marie Harrison
Executive Director

The preparation of winners

Throughout the sixth year of the Institute's operations, we have continued to concentrate on creating winners at the highest levels of sport. Our approach remains performance-focused, coach-led, and athlete-centred, a philosophy which we believe is at the very heart of the successes which we have seen over the past 12 months.

The Institute's core services are delivered by specialist teams in the fields of coaching, sports medicine, sports science, performance lifestyle, and strength and conditioning. Complementary disciplines also support these central services.



To ensure that our athletes are at the very centre of this breadth of expertise, we have created a way of working which is flexible and tailored to individuals' specific needs. In last year's report, we highlighted our progress on establishing an integrated delivery mechanism from our wide range of specialists, and the past year has demonstrated this system's continued development. Put simply, we are all working together for the good of the athletes and to help them to achieve their full potential. Barriers or 'turf wars' between disciplines or professions must not exist.

Partnerships with personal coaches

The philosophy of working together across our own teams also extends outwards to other sources of expertise and support. In the case of athletes, this is demonstrated most importantly in our partnerships with personal coaches, with whom we work closely and to whom we make available the resources and the breadth of inter-disciplinary knowledge which no one individual can be expected to acquire.

Integrated working

Throughout all our work, the assessment of performance is vital. The key question is: is it improving performance and delivering results? A functional and sports specific approach to individual athletes was carried out with the aim of identifying individual needs and then implementing these recommendations into the athletes' programme plans. This approach has delivered real progress.

Our 400m freestyle swimmer Andy Hunter, for example, has made significant developments in altering his postural awareness both in and out of the water. Through manipulation, soft tissue massage, and circuit training, he has developed the strength and awareness of his body which is now allowing him to achieve and sustain the efficiency of his position swimming. Progress is beginning to show, even at race pace.

An excellent example of our integrated approach in recent months has been with the sport of swimming. Since October 2004, we have been working on an athlete-based technique development programme. Led by our swimming coach Chris Martin, the multi-disciplinary programme has included an Institute team with expertise in sports science, biomechanical and postural analysis, video analysis, sports medicine, nutrition, and strength and conditioning.

If there is one area of the Institute's work which encapsulates our philosophy of integrated service, it is Performance Lifestyle. Through this programme, Susie Elms, Programme Coordinator and the Athlete Advisers work with athletes, coaches and service providers to produce integrated and periodised planning specific to the individual needs and demands placed on each athlete. Working closely with the coach in the development of the sports plan is crucial to this process, as this enables the Adviser to work with the athlete to plan and prioritise their sport with other aspects of their lives.

If there is one area of the Institute's work which encapsulates our philosophy of integrated service, it is Performance Lifestyle.

Left: workshops at the Support Team Conference.

Head Physiotherapist Fiona Shanks taking an athlete through her paces.



This integrated planning for athletes works at two levels: both through the delivery of individual performance lifestyle plans for each athlete and through the regular input of performance lifestyle elements into the work of other core disciplines.

Innovation has combined with integration in our Performance Lifestyle delivery over the past year with a number of new initiatives, including the development of an electronic procedures manual, partnership into research into elite sport at universities, the development of new courses to support media awareness, public relations and sponsorship, sharing best practice with ACE (Athlete Career and Education) New Zealand and the Professional Development Managers at the NZRU Super 12 Franchise Teams, and the development of an education protocol in the Tayside and Fife Institute of Sport to increase awareness and identify communication processes with schools.

Injury prevention innovation

Informed with the same philosophy of integrated working, we have this past year been working on innovative projects such as a pioneering injury prevention programme with the Scotland women's hockey squad.

The background to this project was the high level of serious knee injuries in female contact sports in 2003/04. Research findings on this issue were presented at a multi-disciplinary case conference with all members of the support team present, and this enabled individual injury prevention programmes to be shared for implementation. The programme focuses on certain movements where serious knee injuries tend to occur, especially in female athletes. By practising these 'at risk' movements in a better functional alignment, injuries – and not solely knee injuries – can be reduced, and a significant reduction in all injuries is expected.



Case Study: Performance Lifestyle

Our Performance Lifestyle work aims to help athletes to integrate their sporting career with other aspects of their lives. This year we worked with sailing athlete Charlotte Dobson (above) who was studying in Edinburgh but was required to attend monthly Olympic Development Squad training weeks in Weymouth. This, along with her racing commitments, had put the athlete under pressure from her university to give up her studies, a step she was determined to avoid, if possible.

To address this situation, a meeting was arranged with her department head and the head of the social sciences school. We planned exactly how she would approach the meeting, what information she was to present to them, and we helped her to practise her delivery. Meanwhile, we talked to our university liaison contact to apply pressure 'from the top down' within the university.

The result of the interview was that the athlete was given full flexibility to fit her studies around her sporting commitments, the deciding factor being how much she had impressed the decision-makers with her delivery and organisation.

... the preparation of winners

This has been a fine example of an intensive and integrated approach to individual athlete programme planning, and it is now being adopted in badminton, judo, and for the Olympic GB curling squad in its preparations for the 2006 Winter Olympics in Turin.

Another project which has been extended following its successful one-year piloting in 2003/04 has been our use of dynamic profiling to enhance integration between sports medicine, strength and conditioning, and coaching staff. The purpose of this profile is to provide highly functional data on injury risk and prevention, to link analysis of movement to performance, and to inform and guide the strength and conditioning programme design. Through this functional analysis, we are integrating support services and coaches and encouraging other channels of communication.

Through the use of video for this profiling, we can monitor athletes and provide opportunities for all support services to assess the risk factors and plan specifically and accordingly.

The impact has been a significantly more uniform and objective approach in assessing athletes, presented in a way which is easily understood by all members of each athlete's support team. We are delighted that this functional movement analysis is becoming increasingly recognised and that it is being adopted by some Area Institutes and governing bodies of sport.

If dynamic profiling highlights our integrated style of working, it also illustrates the innovation which is required to ensure that our athletes are given the very best support to compete at the highest level. In the year under review, we have brought forward a series of innovative programmes which, we believe, demonstrate that the Institute is itself performing at the highest level.

The assessing of athletes

In a project supported by UK Sport, for example, we have developed a tensiomyography (TMG) resource which provides information relating to injury prevention and athlete conditioning needs. This has been piloted in athletics and judo. In a highly relevant development within this project, research at the University of Stirling explored TMG analysis techniques to reveal neural changes in muscle function following massage.

Jodi Hawley, Exercise Physiologist (East of Scotland), led an innovative project to link physiological and performance analysis measures to assess training and competition demands within international matches, pre-game warm-up routines and post-game recovery for Scotland's rugby 7's team. This has linked heart rate data to video so that physical demands and recovery times can be analysed and has resulted in a varied warm-up routine which takes match and environmental circumstances into account.

Much of the innovation in our work over the past year has indeed come in the fields of sports medicine and sports science, and rugby 7's also benefited from a programme to measure the variability in heart rate two weeks prior to the squad departing for the Commonwealth Youth Games in Australia, and then again two weeks after their return. With base lines established, advice was given on managing jet lag. The second measurements revealed that all the players had returned to their pre-trip levels, and we therefore reached the conclusion that, with appropriate advice, athletes are back to normal two weeks after return from such a trip.

Annual Forum (Left)

Head Physiotherapist Fiona Shanks and Physiotherapist Sue Warwick delivering their workshop on dynamic profiling at the 2004 Annual Forum.

Team Murdoch (right)

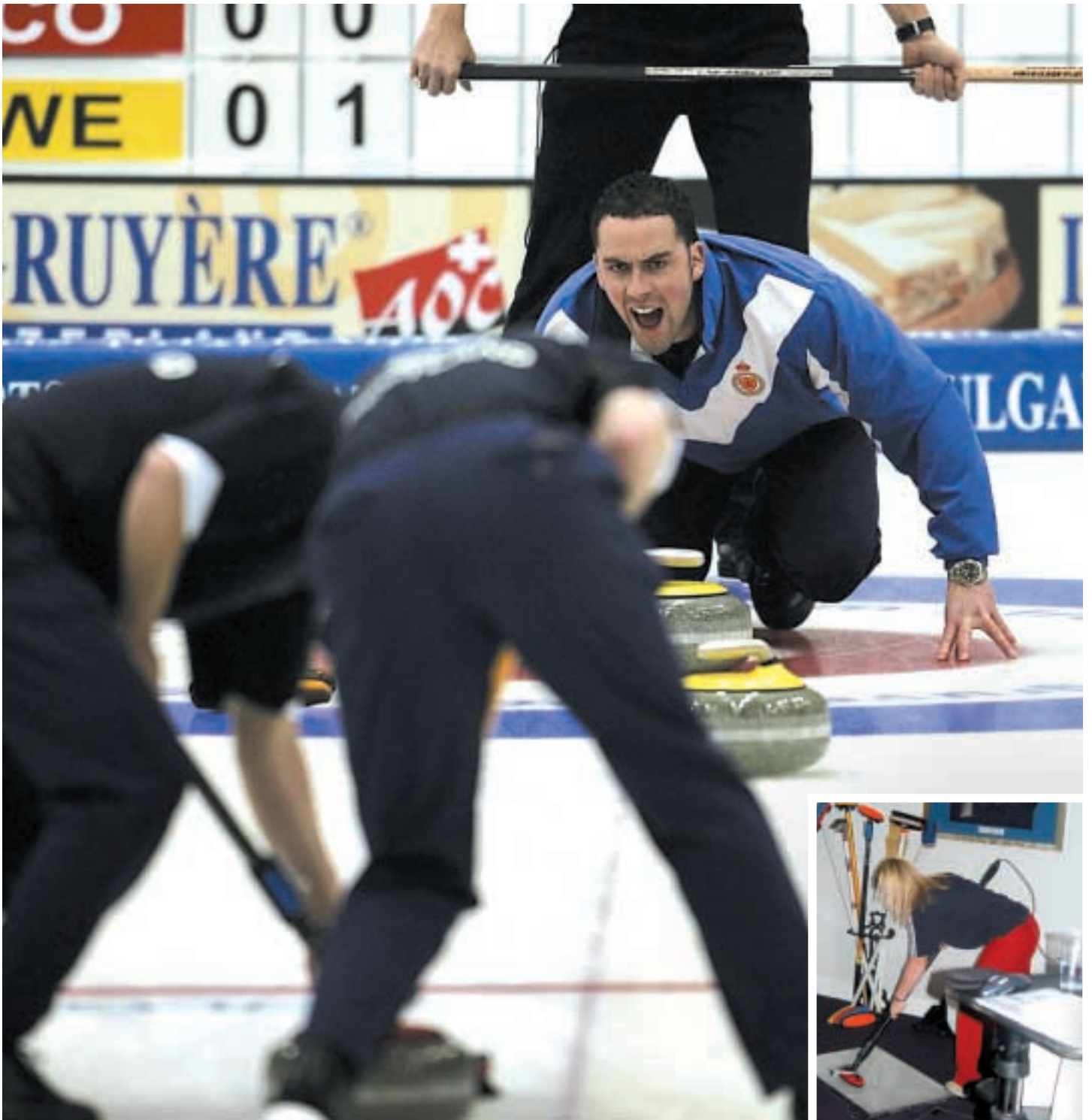
A sterling performance from Team Murdoch at the Men's World Championships in Canada.

Kelly Wood (far right)

Institute curler Kelly Wood demonstrates the sweep ergometer.



Through the use of video for this profiling, we can monitor athletes and provide opportunities for all support services to assess the risk factors and plan specifically and accordingly.



Case Study: Sweep ergometer

With the selection of the GB curling teams for the Turin Winter Olympics 2006 imminent (December 2005), the measurement of players' individual skills and profiles is an important objective tool for the selectors.

With this in mind, the Institute, in conjunction with UK Sport, set about developing a sweep ergometer that would measure each athlete's individual sweeping profile. The ergometer was developed by the University of Edinburgh's Materials Science Department and features a brush which measures both downward and horizontal forces as well as frequency and length of sweep. A built-in memory card can hold data from 200 trials before being downloaded.

With this information, we can define the work done by each athlete over a given time trial. The print out gives us the opportunity to study each athlete's profile and give feedback to the athlete, where necessary, on how and where they can improve their sweeping efficiency – an excellent example of new technology being used to boost performance. The ergometer now forms an integral part of our fitness test protocol.

... the preparation of winners



Tackling iron deficiency

We are also tackling the issue of iron deficiency in Institute athletes, a problem which is mainly associated with female athletes and which has been particularly prevalent in judo. Following the appointment of a full-time Dietitian, Lorraine Cullen, working with our Medical Director, Dr Brian Walker, this problem was reduced through education by the end of 2004. However, with the induction of the female hockey squad into the Institute this year, the problem has re-surfaced and further education is now being led by our nutritional network.

Throughout the sports, we have made advances in the field of nutrition in the past year. We have piloted standardised forms for providers; developed new communication channels for athletes, coaches, and providers; and created a nutritional profiling system for all our athletes. In the sports of badminton, curling and hockey, nutritional support has been contracted to lead specialists, while Lorraine Cullen leads on swimming and our individual athletes. In other sports, lead individuals are providing expertise.

New programmes

Innovation to deliver benefits to athletes' performance or preparation has taken other forms during the year. A new agreement has been reached with Scottish Hockey which sees the whole of the Scotland women's squad – some 21 players – now being given full Institute support in addition to the support given to the men's squad. Every player in the women's squad is now an Institute athlete and is benefiting from the range of Institute services.

A programme has also been agreed with the Scottish Football Association, through which we have inducted the ten best Scottish-based players in both the under 17 and under 18 age groups. Two sessions with each player per week and ten weekend gatherings per year are being held in a programme which is being supported not only by the SFA but most importantly by many of the SPL and SFL leading clubs.

Hi-tech know-how

Hi-tech know-how has given us the perceptual goggles which, through a project led by our High Performance Golf Coach Steve McNally and our Sports Science Co-ordinator Malcolm Fairweather, is providing technological advances in golf swing analysis. The potential for immediate training effects comes through the use of this technology when coupled with interactive video analysis software, and our Director of Performance, Marty Aitken, has led a number of sessions with core sport coaches to assess how the system can be developed across other sports. Some of this work is already under way; with athletics and badminton now utilising this technology.

Our sweep ergometer and perceptual goggles were on show at our highly successful Annual Forum in May; a key event in our communications programme and one which attracted a record attendance.



Case Study: Nutritional support to swimmers during Mexico training camp

Our Sports Dietitian, Lorraine Cullen (left), accompanied the national swimming squad during its training camp in Mexico to provide nutritional support to the athletes, an important factor in ensuring performance outcomes. Factors such as the flights, jet lag, hydration, eating patterns, the food at the camp, hygiene, the purchasing of foods for each athlete to ensure that they were fuelled adequately prior to morning training and had healthy snacks throughout the day, were all monitored and addressed.

The stresses of altitude were also major factors. Prior to departure, we monitored iron status and provided iron and vitamin C supplements to ensure that blood stores were at their best to achieve the potential benefits of training at altitude. With hydration needs being greater at altitude, Lorraine monitored athletes' levels daily and measured body weight daily to make sure that the athletes were not losing weight due to an energy imbalance. By corresponding these results with the hydration measures, she was able to determine if these were true body mass changes or merely dehydration. She was then able to put in dietary interventions to ensure that all the athletes were adequately refuelling and rehydrating under the stress of both a very intense training camp and the environmental strain of altitude.

State-of-the-art technology has also come to the National Badminton Academy at Scotstoun, where a video analysis system has been installed. This is enabling greater interaction and top-class performance analysis to be carried out with our badminton squad. Similarly, an underwater and above-pool camera system has been installed (with support from UK Sport) at the National Swimming Academy in Stirling to assist with stroke technique.

The year has also seen progress on an important facility. By late next year, the Super Centre for Strength and Conditioning in the East of Scotland is scheduled to be completed at Heriot-Watt University, with funding from **sportscotland**. The facility design and equipment requirements have been led by Dave Clark, our Head Strength and Conditioning Coach. He has also been closely involved in the development of strength and conditioning facilities at Dundee University, the University of Stirling, the Galleon Centre in Kilmarnock, the Fife Institute, Falkirk College, the David Keswick Centre in Dumfries and Galloway, the Aquadome in Inverness, and at the Centre for Sport and Exercise [CSE] at the University of Edinburgh.

Meanwhile, plans are progressing for a National Curling Academy at Forthbank, Stirling.

Finest practitioners

Our aim through these and many other initiatives during 2004/05 has been to create winners for Scotland. This is a vision that can only be achieved if the right plans are devised and delivered by the right people, in partnership with other leading players in the field. In the staff at the Institute we believe that we have some of the very finest practitioners in their field, not just in the United Kingdom but in the world.

We will continue to be judged by our own performance and by the results of our athletes. In 2004/05, the trends in both have headed in the right direction.

**High Performance Golf Coach
Steve McNally and Chairman
Dougie Donnelly testing the
perceptual goggles at the Institute.**

The performance of winners

We are well aware that our performance will be judged on the results of our athletes. Our stated objective is to create winners. We have, accordingly, established both a vision and a delivery system which we believe is changing the culture of performance sport in Scotland. This is an important foundation on which we are building significant progress.



Expectations of the Institute and our athletes are rightly high, but the reality of international sport is that the competition is continuously pushing back the frontiers of achievement. Our mission is not only to improve year on year but to out-do the progress of every other country in the world. For a small nation like Scotland, this is a challenging task – one which we relish and one which we tackle with a sense of both commitment and reality.

Highest level of expertise

Creating winners is a complex, exhausting, demanding, emotional, and often expensive challenge; one which demands the highest levels of expertise and human understanding. Our commitment to the challenge has never been in doubt, and we are, each year, adding to our skills through the team we assemble and the partnerships we work to forge. The year under review has further strengthened our capabilities to achieve our overall aim.

The highlights of the year for many were the Athens Olympics and Paralympics. They brought some extraordinary achievements by Institute athletes, which, rightfully, should be formally recorded here.

Cyclist Chris Hoy achieved the supreme accolade – an Olympic gold medal in the 1 km time trial. This wonderful achievement was almost emulated by two other Institute athletes. In the canoe slalom, Campbell Walsh took the silver medal, while rower Katherine Grainger also won silver in the women's pairs. In winning her medal, Katherine became the only British woman to have won two Olympic rowing medals, having taken the silver in the women's quadruple sculls in Sydney.

High-profile successes such as these strengthen the case for our holistic approach. Last year, we described our work with cyclist Chris Hoy. Slalom canoeist Campbell Walsh received similar support, with Strength and Conditioning Coach Dave Clark working with World-Class Performance Physiotherapist Margie Olds to bring Campbell to the peak of condition for the Olympics – a great example of integration in high performance sport working remotely and across different British organisational structures.

Chris Hoy
King of the Kilo
Chris Hoy in Athens.

Katherine Grainger
Olympic silver medallist and World Champion Katherine Grainger in action.

Andrew Lindsay
Paralympian 100m backstroke medallist Andrew Lindsay in Athens.



Case Study: Communications/sharing knowledge

As the Institute continues to develop and evolve, our ability to communicate well and to share knowledge is ever more important. While this is a constant focus for the organisation, a number of initiatives during the year have highlighted the high priority we give to this aspect of our work.

In May we hosted our Annual Forum, which attracted a record number of attendees - some 147. We presented two showcases, one on the perceptual goggles being used in golf and the other on the advances being made with the ergometer in curling. The event also featured an audience with former British Lions captain Martin Johnson on the theme of 'creating winners'.

The year under review also saw the first of the new style athlete induction days, with the theme of 'dare to dream'. These days are geared to highlight to the new athletes the range of support available at the Institute and the culture of the organisation, and some 58 athletes and staff attended the first of these sessions. The new structure of talks, insights, workshops, meetings, and sports-specific sessions was well received and this model is now being repeated on a twice-yearly basis.

Another step forward has been made in our internal communications, with a staff survey and several focus groups being organised and the findings being presented both to staff and to athletes. To implement the action points from this research, a staff communications group has been formed.

Left to right: Assistant Rugby Coach Scott Crawford, Peter Urey (hp), Executive Director Anne Marie Harrison, Martin Johnson, Shirley Webb, and Rugby Coach Bob Easson at the 2005 Annual Forum.



Case study – Campbell Walsh

For Olympic silver medallist and World Cup series winner Campbell Walsh, our work focused on a one-year strength and conditioning programme in the build-up to the Athens Olympics. The first four weeks of the programme, Campbell spent in Stirling, working with Head Strength and Conditioning Coach, Dave Clark, on strength technique. Regular meetings were held so that the physiotherapist, Dave, and Campbell's coach Juerg Goetz could discuss and monitor progress.

Dave then visited Nottingham (Campbell's base) every six weeks to work with him in the gym, using either the Muscle Lab to monitor strength and power or video to assess Campbell's technical development in the selected exercises. Ongoing monitoring of the strength training total volume load was used to ensure that Campbell was afforded good recovery but maintained the levels of strength and power necessary to support his in-boat performance.

Over the 12-month period, Campbell increased his 1RM (1 rep max) in the power clean exercise by 15kg (25%) and increased his average peak power output for the bench pull from 469 to 488 Watts across the three-week taper cycle leading up to the Olympics.



... the performance of winners

Aileen McGlynn (right) won two gold medals in the inaugural Paralympic World Cup and Jim Anderson won a further gold medal.



Another fine achievement was that of Alison Sheppard, who became the first swimmer to compete in five Olympic Games, while three Scottish men's hockey players (plus a travelling reserve) combined to record a strong Scottish presence in the Great Britain team, as did the seven Scottish swimmers and five track and field athletes.

At the Paralympics, swimmer 'Jim the Swim' Anderson won no less than four gold medals – in the 50m freestyle, the 100m freestyle, the 200m freestyle, and the 50m backstroke. For Jim, our work focused on integrating biomechanical support with his coaching.

Andrew Lindsay also won a swimming gold, in the 100m backstroke, while disability cyclist Aileen McGlynn, who was being supported by the Institute and has now been inducted as an Institute athlete, took a gold in the 1km time trial and a silver in the tandem sprint.

Mhairi Love brought home two silver medals from the 400m freestyle and the 4 x 50m freestyle relay, while Maggie McEleny, competing in her fourth Paralympic Games, won a gold medal in the 4 x 50m medley relay, a silver in the 50m breaststroke, and another silver in the 150m individual medley.

Another Paralympic Games veteran, Kenny Cairns, won a bronze medal in the 4 x 50m freestyle relay in his fifth Games, while on the track, sprinter Stephen Payton won bronze in the 400m.

In the inaugural Paralympic World Cup, Aileen McGlynn won two gold medals and Jim Anderson won a further gold medal.

Unique technical feedback

The Institute's Paralympic swimmers were supported by Professor Ross Sanders and students based at the University of Edinburgh. Professor Sanders has established a unique technical feedback and biomechanical resource at the University's Centre for Aquatics Research, and the environment provided immediate feedback opportunity from 12 underwater and above-pool perspectives via video output.

Coach Anthony Stickland and the athletes' personal coaches could therefore provide technical guidance while the athletes were in the pool. Furthermore, each athlete's video footage was stored on DVD's alongside qualitative analysis ideas and measures. This unique work is currently being built upon by quantitative biomechanical measures coupled with physiological analysis to seek further insight and advantage in the lead up to the Commonwealth Games in 2006.

Success elsewhere

While Athens took the top honours for the profile of its events, our athletes, many of whom compete in non-Olympic sports, also found great success elsewhere.

US Junior Open tennis champion Andrew Murray benefited from performance analysis with Pamela Stevenson of Elite Sports Analysis. He became a winning member of the Great Britain Davis Cup Team, and, having been given a wild card entry following his fine results, shot to public prominence with his performances at Wimbledon in the summer of 2005. This was followed by his senior debut at the US Open and his achievement of being the only British player to reach the second round.

World Cup series winner Katherine Grainger took gold in her new boat, the quad sculls, at the World Cup event in England, and most recently won the World Championships in Japan.

... the performance of winners



Case study – Jim Anderson

For disability swimmer 'Jim the Swim' Anderson, who performed magnificently at the Paralympic Games, we have provided a range of integrated services over a number of years. Among these have been medical treatment, weekly physiotherapy, and a physiotherapy and exercise programme in the gym.

This physio/exercise programme was passed on to the British Paralympic Association, thus enabling the work to be continued by their physios when Jim was abroad preparing for competition. In addition, a series of performance lifestyle sessions were held with Susie Elms.

Gymnast Adam Cox (who has recently received medical and physio support plus a three-week training camp in China) won a gold medal at the Commonwealth Youth Games, while shooters Mike Thomson, Susan Jackson and Sheena Sharp all won gold medals in their respective events at the Commonwealth Shooting Federation (European division) Championships.

Boxer Craig McEwan won gold at the Arafura Multi-Nations Games in Darwin, Australia. He was given support to train in the US and gain sparring experience, and we also supplemented his support in Scotland in the areas of strength and conditioning, nutrition and physiotherapy. He went on to take a bronze medal at the Commonwealth Federation Boxing Championships in Glasgow.

The men's and women's curling team (representing Great Britain) have qualified for the Winter Olympics in Turin, as has snowboarder Lesley McKenna, while our High Performance Curling Coach Mike Hay was appointed performance director/head coach for the Winter Olympics curling team programme. Team Murdoch won a silver medal at the World Championships and Tom Brewster's rink retained the Lucerne Casino Tournament Gold.

Notable achievements

While the sport of judo disappointed in Athens, there have been some notable achievements by Institute athletes. Euan Burton won a bronze medal at the European Championships; Sarah Clark won bronze in the Paris Open, which provides some of the toughest opposition in the world; Stephen Vidler won gold in both the US Open International and in the GB Grand Finals; Fiona Robertson won bronze in the US Open International and silver in the GB Grand Finals and the Finnish Open; and twin sister Donna Robertson won bronze in the Canadian Open International and gold in the GB Grand Finals.

Golfer Clare Queen won the 2004 British Ladies Stroke Play Championship, was runner-up in the Scottish Amateur Championship, and was selected for GB & Ireland for the World Amateur Championships, while in the same sport Paul O'Hara was also runner-up in the Scottish Amateur Championships. Paul has been a keen user of the perceptual goggles and believes that they have made a real difference to his technique. The goggles have been incorporated into the V1 Video Analysis platform utilised by the golf programme, all with the assistance of Malcolm Fairweather.

Strong finish

Kylie Walker made a strong finish to her season with a win at the Mackie Bowl and a second place in the Irish Stroke Play, and she finished top Scot in the European Individual Championship with an impressive final round of 68. Jenna Wilson has now won three order of merit titles, along with a fourth-place finish in the British Amateur Strokeplay. Scott Henry, in his last year in boys' golf, was close to a clean sweep with a win at the Scottish Boys' Amateur and runner-up in the Scottish Boys' Strokeplay.

Paul [O'Hara] has been a keen user of the perceptual goggles and believes that they have made a real difference to his technique.



John and Sinead Kerr

Institute ice dancers John and Sinead Kerr.

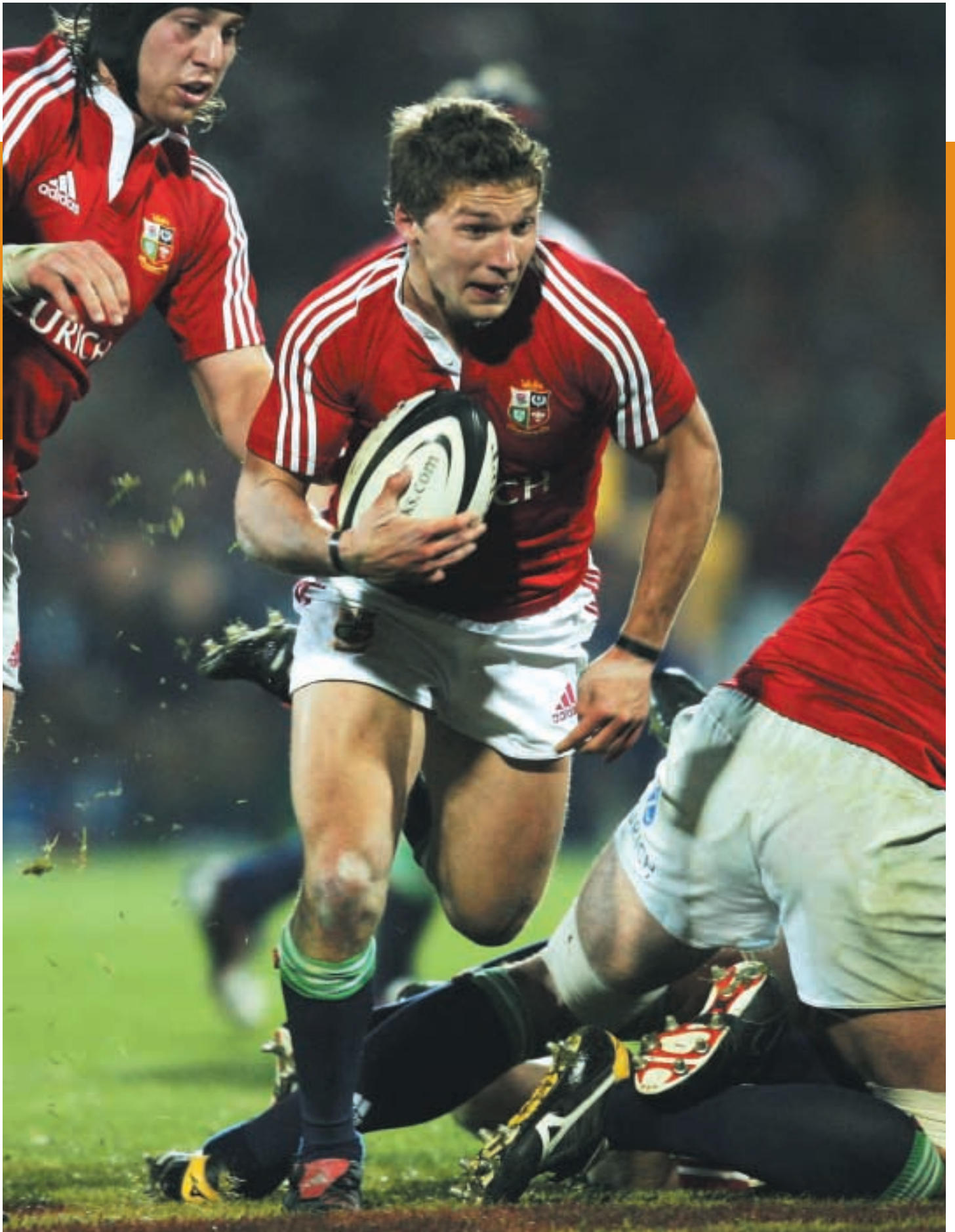
Paul O'Hara

Runner-up in the Scottish Amateur Golf Championships.

Lee McConnell

Anchored the GB team to a great win in the Europa Cup.





Chris Cusiter

Chris Cusiter in action in the British and Irish Lions tour of New Zealand.

... the performance of winners



Case Study: Coaching support programme

We have developed a unique coaching support programme which is addressing Institute swimmers' technique and development and change. Input from Milton Nelms, a world leader in swimming techniques, has been complemented by the involvement of Fiona Shanks, the Institute's Head Physiotherapist, Dave Clark, our Head Strength and Conditioning Coach, and Malcolm Fairweather, our Sports Science Co-ordinator, plus Pamela Stevenson from Elite Sports Analysis (for training stroke assessment) and the University of Edinburgh (for biomechanical analysis). The programme is delivering positive results and is a fine example of integration and innovation combining to support our athletes.

Three swimmers were selected for the GB team at the European Junior Championships. Scott Houston won a silver medal and Lorna Smith took three bronze medals. Three Institute swimmers were selected in the GB team of nine for the World Championships and similarly eight out of the 14 selected for the next European Junior Championships are Institute athletes.

In athletics, the highlight came at the Women's Europa Cup (B Division). Three Scots were selected, and Shirley Webb served notice of her outstanding potential by winning the hammer, the first time a British athlete has won this event. Lee McConnell anchored the 4 x 400m relay team to a great win.

Some six Institute rugby players were selected for the Scotland tour of New Zealand and Australia, and Alistair Kellock and Ross Ford earned their first senior caps against Australia. Chris Cusiter became the first Institute player to be selected for the British and Irish Lions when he toured – and performed with distinction – in New Zealand. The 7's Squad finished fifth in the World Cup in Hong Kong in April and are now preparing for the Commonwealth Games in Melbourne in March 2006. Part of the 7's success can be attributed to the additional support from a project involving Elite Sports Analysis and physiology. Players have benefited from changes in training programmes and quality statistical feedback.



Case study – Allan Scott

For up-and-coming hurdler Allan Scott, we have over the past 12 months delivered a truly integrated package of support which typifies our approach. This support has ranged from nutrition (delivered by Lorraine Cullen) and skill acquisition (Malcolm Fairweather) to blood monitoring (Brian Walker), physiotherapy (David Bowmaker), and performance lifestyle (Dot Blackie).

... the performance of winners



The Institute has employed a team of specialist staff to look after the integrated needs and planning/programme behaviour in badminton.

Top rankings in Europe

Finally, in badminton, Yuan Wemyss and Susan Hughes have continued to rise through the order of merit and finished the season ranked 1 and 2 respectively in the European singles rankings. These two, along with Kirsteen McEwan Miller, gave us three players ranked in the top 25 in the world. Susan won the Iceland Open and Yuan won the Portuguese Open, while Central Area Institute athlete Callum Menzies (now inducted into the Institute) took a bronze medal in the European Junior Championships.

Contributing significantly to this success, the Institute has employed a team of specialist staff to look after the integrated needs and planning/programming behaviour in badminton. Steve Bannon (Sports Psychologist), Dr John Bradley (Exercise Physiologist) and Stuart Yule (Strength and Conditioning) provide daily interactive support to the athletes and coaches. John and Stuart guide and develop individualised periodised programme and monitoring behaviour while Steve works on team dynamics and one-to-one performance psychology needs. Together they plan strategy with coaches Dan Travers and Ray Stevens.

More recently, this programme has expanded the integrated coaching and support team via state-of-the-art performance analysis technology in the form of above and rear court cameras in a unique skill acquisition project led by Malcolm Fairweather.

The Institute has provided expert help to its athletes in many ways – through coaching, through the expertise and innovation of sports medicine and sports science, through strength and conditioning work, through ensuring that other aspects of athletes' lives are managed through our performance lifestyle programmes.

Well informed, well planned

Each athlete and each sport receives a bespoke, specific, flexible service which is increasingly well informed and well planned and which is geared to complement the expertise and the support they receive from other providers, including personal coaches and governing bodies of sport.

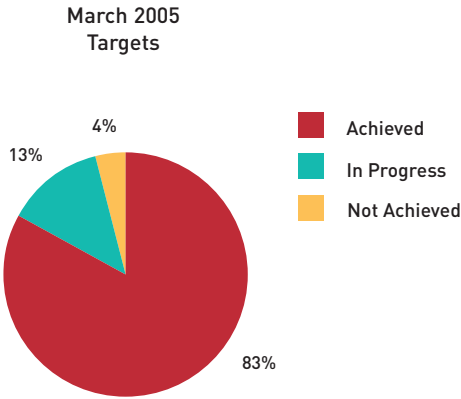
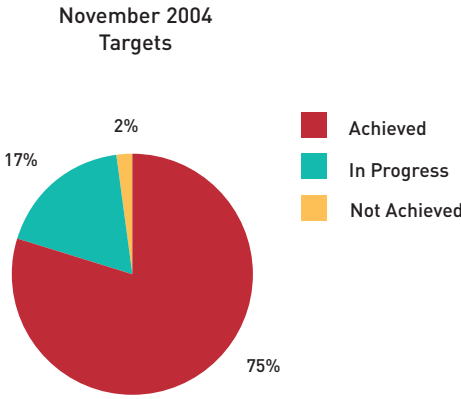
We aim to develop the potential of our athletes and to enable them to perform at the highest levels. We have also challenged ourselves to perform with excellence. In 2003, we set out an Operating Plan for the Institute for the period up to 2007. While the results of our athletes will always be the touchstone by which our success is gauged, the progress on the specifics and the milestones outlined in this plan also provide measurable indicators of the organisation's performance.

As we move ahead into the next phase of the Institute's development, we look back on 2004/05 with some satisfaction but no complacency about the achievements recorded. Much of the rest of the world, including many countries with resources well beyond Scotland's, is also driving forward on the development of high-performance athletes. Our challenge is not only to match but also to exceed their work.

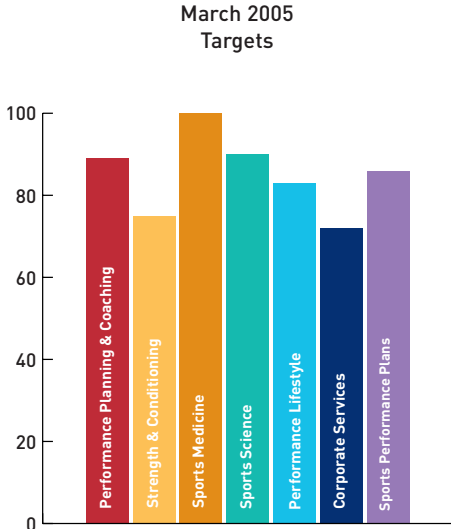
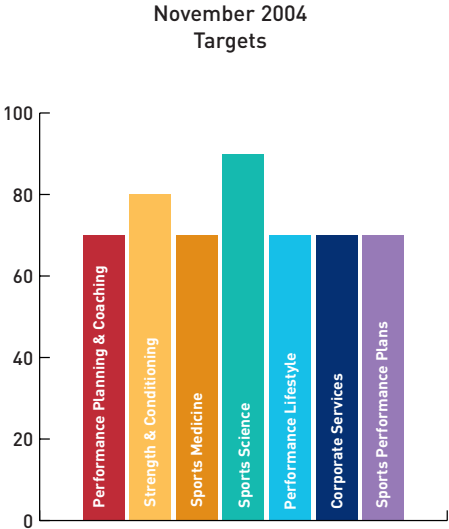
Scorecard

The Institute Operating Plan 2003-2007 – Creating Winners, incorporating the Sports Performance Plans, sets out our key actions and milestones to be implemented to achieve success. The following shows the progress of these plans at two key points throughout the year.

Operating Plan Overall



Specifically



Athlete Rankings

	November 2004 Targets Achieved	March 2005 Targets Achieved	November 2004	March 2005
Milestones	65%	50% (+25% in progress)		
Athlete Satisfaction Survey	75%	n/a		
Contribution to Sport 21 - target 7	7/10	7/10		

Profit and loss account

for the year ended 31 March 2005

	2005	2004
	£000	£000
Revenue		
sportscotland Lottery Fund	3,928	3,627
Other income	218	204
	<hr/>	<hr/>
	4,146	3,831
Operating expenses		
Staff costs	1,688	1,368
Programme costs	1,429	1,549
Other operating costs	897	787
Loss on disposal of fixed assets	2	4
	<hr/>	<hr/>
	4,016	3,708
Operating profit/(loss)	130	123
Amount unutilised repayable to Lottery Fund	(166)	(140)
	<hr/>	<hr/>
Profit/(Loss) before interest and tax	(36)	(17)
Interest receivable	49	16
	<hr/>	<hr/>
Profit/(Loss) on ordinary activities for year before tax	13	(1)
Taxation	(9)	7
Transfer from Capital Reserve	45	10
Transfer to Project Reserve	(49)	(16)
	<hr/>	<hr/>
Retained profit for financial year	--	--

Balance Sheet

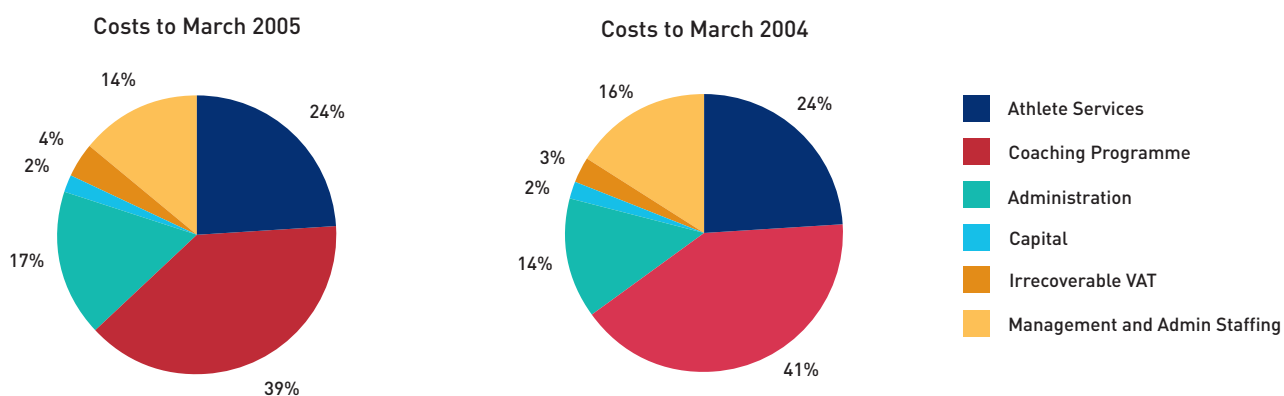
at 31 March 2005

	2005	2004
	£000	£000
Fixed assets	287	381
Current assets		
Debtors	133	105
Bank and cash	668	619
	801	724
Creditors: amounts falling due within one year	(736)	(708)
Net current assets/(liabilities)	65	16
Total assets less current liabilities	352	397
Deferred grants	(287)	(336)
Net assets excluding pension asset	65	61
Pension Asset	15	--
Net assets including pension asset	80	61
Reserves		
Capital reserve	--	45
Project Reserve	65	16
Pension Reserve	15	--
	80	61

The Scottish Institute of Sport accounts were approved by the Institute Board on 27 June 2005. The Scottish Institute of Sport's auditors, KPMG LLP, have given an unqualified audit report on these accounts.

The financial statements for the year to 31 March 2005 are detailed on the previous pages. These accounts show the receipt of the year's core funding from the **sportscotland** lottery fund and a summary breakdown of the main areas of expenditure.

As in the previous year, the Institute's Operating Plan for the period April 2003 – March 2007 formed the basis of programme activity and the spend associated with the plan. Overall spend increased by approximately £308,000 over 2004 in line with expectations. All programmes remain within budget levels of spend. The charts below analyse the spread of spend over the year and provide a comparison with 2004.



The income from Lottery and other sources totalled £4.1 million in the year and enabled the Institute to increase its spend to expected levels in the nine core sports and individual athlete programmes.

Staff levels are now at their optimum and have contributed greatly in sports medicine, sports science and performance lifestyle as well as within the core sports programmes.

Capital spend was slightly higher than 2004 as the investment in support for coaches increased.

Corporate Services increases were kept to budget levels although there was a one-off cost to reduce the Capital Reserve in line with the requirements of FRS18.

Cost control continues to be a priority.

The accounts on these pages are a summary of the Scottish Institute of Sport's accounts. The summary accounts may not contain sufficient information to allow a full understanding of the results and state of affairs of the Scottish Institute of Sport. A copy of the audited accounts which contain the detailed information required by law and under best practice guidelines can be downloaded from the Institute's website at no cost, or obtained from the Business Manager, Scottish Institute of Sport, Airthrey Road, Stirling FK9 5PH at a cost of £6.

Designed and produced by Shaw Marketing and Design, Edinburgh

Photography: Getty Images Steve Lindridge (Ideal Images) Hugh Stewart/Scottish Curler Marc Turner



**SCOTTISH INSTITUTE
OF SPORT**

Scottish Institute of Sport
Airthrey Road Stirling FK9 5PH
Tel: 01786 460 100
Fax: 01786 460 101
Email: firstname.surname@sisport.com
info@sisport.com
www.sisport.com



The Scottish Institute of Sport is part of the
United Kingdom Sports Institute network



The Scottish Institute of Sport is a member of the
sportscotland group of companies