

WEST AND CENTRAL SCOTLAND FOREST CYCLING

RESEARCH FINDINGS & DEVELOPMENT RECOMMENDATIONS

VOLUME I

Final Draft

November 2005

TOURISM RESOURCES COMPANY
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10th November 2005

Dear Stuart

**WEST AND CENTRAL SCOTLAND FOREST CYCLING
RESEARCH FINDINGS & DEVELOPMENT RECOMMENDATIONS**

As promised please find enclosed a final draft of our forest cycling report for West and Central Scotland. Volume I of this report outlines our analysis, positioning, recommendations and development conclusions for each forest in tabular format, together with an indication of visitor numbers.

It must be stressed that the recommendations and conclusions in this final draft still have to be considered and ratified in a national context which inevitably will require development priority timeframes to be demonstrated over individual forest opportunities. In developing the potential / position of each forest however, we have given due consideration to the shape of the future forest cycling products and markets in Scotland.

In Volume II of this report, photos, maps and illustrations are provided. They include regional isochrone maps, forest visuals re future development recommendations and single track trail examples.

Of the key recommendations made in this report, a full economic appraisal has been prepared and is presented as a standalone document (not included in this final draft report).

This report has been prepared for sole use by the study sponsors and no liability to third parties can be accepted.

We have welcomed the opportunity of preparing this report on your behalf and look forward to working / discussions with you in future.

Kind Regards

Yours sincerely

A handwritten signature in blue ink, consisting of several overlapping loops and a long horizontal stroke extending to the left.

David G. Bullough
Associate Director

Ref: DGB/AC/EC/JMc/0646D3-R1

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GLOSSARY

OVERVIEW OF REPORTING FORMAT

Tourism Resources Company (TRC) presents this final draft report comprising eight generic sections for the purposes of understanding and clarity.

- Section 1 - Study Objectives and Research Summary
- Section 2 - Cycling Product and Organisations
- Section 3 - Benchmarking
- Section 4 - Market Segmentation
- Section 5 - Strategic Positioning
- Section 6 - Demand and Market Trends
of Mountain Biking in Scotland
- Section 7 - Cycling – A Key Visitor Destination
- Section 8 - Product Evolution, Indicative Trail Development Costs,
Sustainable Trail Systems and Other Issues

Section 9 presents our research findings following our detailed examination of the four Forest Districts. We present our forest evaluations in four separate standalone sections, Parts A to D. The four Forest Districts and related 'parts' are as follows:

- Part A Cowal and Trossachs;
- Part B Lorne;
- Part C West Argyll;
- Part D Scottish Lowlands.

It is suggested that where the reader is looking for an understanding of recommendations by Forest District, **they should first read Sections 1 to 8** (to obtain the contextual background information) **followed by the relevant Part A through D.**

1 STUDY OBJECTIVES AND RESEARCH SUMMARY

1.1 Study Objectives

Forestry Commission Scotland (FCS) and other associated funders engaged Tourism Resources Company (TRC), together with EKOS (economic consultants), to carry out an extensive strategic study into the opportunities for forest cycling in the West and Central Scotland area. Consultants were asked to consider key individual forests (as identified by the local Forest District) for their suitability for forest cycling re market opportunities, development recommendations and strategic product positioning. Indeed, in summary, every forest was critically assessed against its potential to become a national / regional and / or local 'face' of mountain biking and forest cycling in general in West and Central Scotland.

The four Forest Districts in West and Central Scotland under study were as follows:

- **Part A** Cowal and Trossachs;
- **Part B** Lorne;
- **Part C** West Argyll;
- **Part D** Scottish Lowlands.

1.2 Study Background

FCS is now the market leader in forest cycling in Scotland. However it is the development of dedicated purpose-built single track cycle routes which has confirmed FCS as one of the World's best for mountain bike cycle access, innovation and product quality. At present, the best examples would include Glentress (part of the 7stanes project) which attracts upwards of 150,000 riders annually; Fort William, Aonach Mor a recognised World Championship Events, Downhill and Witch's Trails Cross-Country venue / destination; and developments such as at Ae and Mabie Forests (Dumfries), Kirroughtree (Newton Stewart) and Laggan Wolftrax (Inverness-shire) which are helping open new access / tourism potential to remote rural areas of Scotland.

Scotland has developed an internationally renowned mountain bike product – the envy of many of its competitors. Scotland is fast becoming a destination, a mecca for domestic and overseas cycle tourists.

The initial phase of purpose-built mountain bike trails was in Southern Scotland, as a result of public money being available to alleviate the economic downturn in rural areas due to Foot & Mouth. In parallel, Scotland has successfully hosted rounds of the Annual Downhill, Cross-Country and 4-Cross World Cup events. There is also a build up to the forthcoming World Championship mountain bike event to be held in Fort William in 2007.

During 2005, two purpose-built mountain bike developments in the North of Scotland at Laggan Wolftrax and Learnie will have opened.

It is not surprising that the four Forest Districts in West and Central Scotland now believe it is time to evolve a strategic action plan re the potential development of national, regional or community-led cycle / centres in their areas, given the good levels of access to Central Scotland population and visitor markets.

TRC has been invited to work up a strategy for the client group and to consider and ensure that future cycling provisions in the West and Central Scotland region are considered and developed at a strategic level. It is important that market demand levels and product sustainability of trails is determined to ensure maximum impact from any resources invested by the four Forest Districts in West and Central Scotland. It is essential that the correct range of products is developed in line with market demands / expectations. It is necessary that a planned trail system is developed which is market-led in a structured and strategic way and is not ad hoc.

This study will also provide additional strategic background information to be used in the formation of the National Cycling Strategy for Scotland concurrently being prepared by TRC and FCS.

This study will assess Scotland's cycling market in general and take account of current demand and supply trends, increasing competitive environment and other issues re displacement. Thereafter, the 'best fit' forests / sites will be identified – if appropriate, and the strategy re scale, scope and type of future developments (required to meet the core objective of FCS / client) determined.

It may be quite possible that some forest areas should not be developed for single track cycling products. The consultants will also consider the validity of maintaining a ‘historical’ / traditional forest cycling product to complement single track development, but issues of safety and liability will have to be addressed.

TRC have teamed up with economic specialists (EKOS) to provide the full range of skills needed to complete the tasks required and outlined in the brief, including individual market and economic development quantification. As a team we are highly experienced and knowledgeable of the cycle market in Scotland.

1.3 Summary of Research

In line with your brief, 13 forest areas within the boundaries of four Forest Districts were examined. However over and above this and in line with ‘other’ / localised aspirations / possible opportunities, a further 17 forest areas were visited, examined and researched. A breakdown of individual forests by district is as follows:

FOREST BREAKDOWN BY DISTRICT			
Forest District	Forest Area	Forest District	Forest Area
Cowal and Trossachs	<ul style="list-style-type: none"> • Glen Finglas / Ben A’an • Strathyre • Garadhban • East Shore of Loch Lomond • Callander Crags • Loch Ard • Achray • Ardgartan • Glenbranter • Dunoon 	Lorne	<ul style="list-style-type: none"> • Fearnoch • Barcaldine • Glen Duror • Glenachulish • Brecklett • Glencoe Lochan • Bridge of Orchy and Glen Lochy • Strathfillan • Glen Dochart
West Argyll	<ul style="list-style-type: none"> • Carradale • Kilmichael • Knapdale 	Scottish Lowlands	<ul style="list-style-type: none"> • Blairadam • Carron Valley • Sannox • Arran South • Arran West • Brodick Castle • Brodick Central (Clauchland Hills) • Fauldhouse

With regards to each of the 30 forest areas, TRC consultants used a number of research techniques to assemble the information that would allow us to fulfil the terms and objectives of this study. In later sections of the report our research findings, strategic positioning evaluation, model usage patterns, recommendations and conclusions are detailed.

A number of qualitative and quantitative research techniques were involved in the research and consultation process. This included the following key contact sources as shown below:

Research / Consultation Input	Key Contact (Sources)
Key Stakeholders	FCS ie Headquarters, District Managers, Forest Managers, public sector partners ie SNH, Local Enterprise Company, Scottish Environmental Protection Agency, Royal Society for the Protection of Birds, VisitScotland, key regional networks.
Relevant Third Parties	Local tourism infrastructure, bike groups, private businesses, public sector initiatives, landowners, community representatives, accommodation / tourism sector.
Forest Structures / Development Proposals	Local foresters, bike clubs, Councils, recreation and planning departments, Lochaber Outdoor Capital.
National Strategy Links	Cycle Scotland, Sportscotland, Active Scotland – review emerging mountain bike products and key locations.
Benchmarks (UK and International)	Relevant sites, forest managers, bike clubs, community representatives etc.
Desktop Market Analysis	Desktop review of each forest’s market potential re cycle shops, activity providers / operators, accommodation sector and tourism sector. Qualitative market opportunities etc

Note: In addition to the above research, an extensive field trip to each of the 30 forest areas was undertaken by consultants.

In Appendix I, we have included a detailed list of project consultees and organisations – consultants have carried out over 100 consultations in connection with this study.

2 CYCLING PRODUCT AND ORGANISATIONS

2.1 Introduction

In this section the consultants provide a wider overview of the various cycling products – most conducive to our research examination and evaluation. It includes a review of emerging cycling products re single track purpose-built mountain bike centres as well as the more traditional forms of cycling re forest / road / race etc.

2.2 The Cycling Product – An Overview

There are many different reasons for an individual to go cycling. It can be as a means of transport between A and B, it can be as a leisure activity for fun / enjoyment and exercise or it can be event or competition-related. In each case, and for whatever the reason it must be appreciated that there are many different ‘types’ of cycling from road, track, BMX, mountain biking, cycle cross, to indoor, indoor touring and trials. Indeed, currently there are eleven different types of cycling events in the Olympic calendar each requiring different skills, strengths and equipment.

The above ‘types’ of cycling are not all relevant to our research study – the purpose of the above is only to highlight to the reader the breadth of cycling ‘types’ currently in the marketplace. A breakdown of the different cycling products important to our research study would include the following:

(i) The National Cycle Network (Sustrans)

Sustrans, the sustainable transport charity, works on practical projects to encourage people to walk, cycle and use public transport in order to reduce motor traffic and its adverse effects.

Sustrans has developed the National Cycle Network in partnership with other agencies. It currently comprises a 2,400km network (profiled on six maps covering the UK) with over 1,300 miles of waymarked routes, one-third of which are traffic-free paths, the rest following quiet lanes or traffic-calmed roads.

The Sustrans routes offer opportunities for long-distance cycling, touring, tourism / overnight visitor-related activity as well as for day visitors, local populations to use for fun / enjoyment / health reasons etc. Where local people or visitors cycle a section or short loop of a cycle path the Sustrans National Cycle Network is an integral part of the Scottish cycling product portfolio and plays an important role in attracting / supporting and promoting cycling in Scotland.

The National Cycle Network is augmented in each area with a range of local routes, networks and paths, which boost the range of cycling opportunities both for local people and tourists. The Sustrans network is expanding particularly with the local network links.

At a Scottish level there are a number of key important additional long-distance National Cycle Network routes being considered eg:

- A new route from Inverness to Fort William on the South side of Loch Ness suitable for touring cycles (The Great Glen Cycle Way is for mountain bikes only);
- Consideration is being given to improving sections for cycling the Speyside Way;
- An 'off-road' route is being sourced for cycling from Fort William to Oban with further links to Campbeltown / Kintyre via Lochgilphead;
- A strategic link has been suggested from Killin to Tyndrum via Crianlarich. A future link may be possible through to Oban but, in any event, the West Highland Way North of Tyndrum can largely be cycled (mountain bikes only);
- A strategic 'off-road' link to connect Arrochar with Tarbet and the rail network is being considered.

The National Cycle Network is accessible to all and used by people for short walks, dog walks, jogging, family cycling as well as long-distance cycle tourists. Each section of the National Cycle Network has a concordat between the landowner and Sustrans which covers issues such as route inspection, repair and maintenance.

(ii) Road Cycling Provision

Usually termed day riding or cycle touring. This type of cycling needs little preparation or special equipment and applies to all types of conventional cycling activity on roads ie main roads, minor roads, in towns and cities, countryside including signed cycle road networks / 'trails' etc. Many of Scotland's secondary towns and villages have a host of quiet roads and rural lanes suitable for safe cycling.

In much of Scotland, many towns and cities boast attractive traffic-free cycling routes starting in or near their centres and threading their way out into the surrounding countryside. They offer flexible, safe, healthy and enjoyable access for people who wish to cycle. This has been a key part of the Scottish Executive's thinking on road cycling in Scotland.

(iii) Private Estate Holdings

In recent years, and with new access legislation, private landowners are much more amenable to mountain bikers utilising their existing networks of estate roads, Land Rover tracks and long-distance trails. These long-distance trails in particular provide an essential link in Scotland's long-distance wilderness cross-country cycling product.

Indeed we have identified a number of estates in Scotland preparing or rolling out diversification strategies (see Appendix VI for more information on mountain bike / cycling developments on private estates).

Purpose-built single track cycle route development as yet on private estate land has been limited re capital cost / development constraints. However the consultants are aware of future developments at Dunrobin Estate, Golspie in Northern Scotland and at Drumlanrig, South of Scotland. There is also interest in possible developments at 'other' private estate / ski resort centres.

Apart from Aonach Mor (unlike North American resorts) Scotland's ski slopes have not yet developed purpose-built downhill mountain bike networks to encourage summer visitors. The Lecht ski slope, however, has developed tubing, mountain boarding and Deval Kart (Devil Kart) activities aimed at families during the summer months and has just opened a new café / visitor facility. A logical extension to these summer activities would be the inclusion of downhill mountain biking, if trail development and ongoing maintenance could be funded. The operators of Glencoe Ski Slope and Glenshee are considering adding summer mountain bike uplift to help improve the sustainability of the chairlift facilities.

The Aonach Mor chairlift now attracts only between 20,000 and 40,000 skier visits (even in a good year). The number of summer sightseeing visitors is around 165,000 each year. Downhill mountain bikers currently account for only about 4,000 lift pass sales and in reality this is probably less than 1,000 individual visitors each visiting about four times a season.

(iv) Forestry Commission Scotland

Forestry Commission Scotland offer the largest and widest range of facilities for recreational cycling in Scotland. Their mission is to protect and expand Scotland's forests and woodlands and increase their value to society and the environment.

There are over 100 forest cycling destinations for the visitor to choose from within Scotland. This type of 'off-road' cycling is generally on un-metalled / forest roads – traffic-free and generally a safer, quieter experience than road cycling. Off-road cycling can generally be broken down into two sub-headings: (1) being the traditional forest cycling product, which has historically occurred on forest roads for many decades; and (2) the 21st century single track / purpose-built mountain biking facilities which are being developed at a brisk rate throughout Scotland. A description of both is as follows.

A – Traditional Forest Cycling

- The Forestry Commission offers cycling routes in many of its forests, and a variety of cycling experiences from wide forest roads, waymarked trails to narrow single tracks. In many instances these trails are multi-purpose and used for commercial forest activities or recreation pursuits etc. The Forestry Commission have over 2,600km of cycle routes in forests and features arguably the best off-road cycling route provision in Britain;
- In February 2005, the Scottish Outdoor Access Code came into operation and as a result everyone is now able to enjoy statutory access rights to cycle on FCS land. Cyclists can use all forest roads (even if they are not signposted);
- Predominately, forest roads are multi-user and wide enough for vehicles, cyclists and horse riders to share;
- Increased future access to forest cycling is expected through community woodland initiatives ie The Woodlands Trust and Active Woods, which is a Forestry Commission campaign to offer a greater range of health and fitness opportunities to the public within the forest assets.

B – Purpose-Built Single Track Mountain Biking

- The initial development of more intensive single track cycling in Scotland's forests was seen as a catalyst to assist rural development and economic opportunity / diversity (see 7stanes, Fochabers, Learnie etc);
- The 7stanes project resulted from the aftermath of the Foot and Mouth crisis in 2001, the growth of mountain bike ownership and product developments in Wales and overseas (North America in particular). Scottish purpose-built developments have followed the North American-style model ie Whistler (Canada), Moab (Utah);

- To date single track cycle forest routes have been largely supplied, driven by the personal experience of keen mountain bike enthusiasts. However evidence of anecdotal market growth has been noted recently;
- Forest cycle products have evolved and been developed by FCS in geographical terms in the top and bottom thirds of Scotland on rural economic grounds (ie as yet there has been no significant development, in West or Central Scotland);
- The current purpose-built mountain bike products tend to attract a predominance of males 20-35 years old – aficionados / enthusiasts but at certain sites (see Glentress) there has been a growth in woman and older cyclists. A Saturday Morning Club has promoted the facilities to children providing tuition, guiding, etc;
- The original routes of many mountain bike trails both in Scotland and overseas were started by local volunteers, youths who created jumps and trails in forests or woodlands close to where they lived. This informal community development has been at the heart of many of the new routes expanded and progressed by FCS;
- In most purpose-built site development scenarios the difficult / signature routes have been developed first ie 'black routes' (both longer cross-country and downhill) requiring the highest technical ability and word of mouth recommendation have generated trail usage. Very often these trails have been built by a local community or volunteer base for their own use;
- The recent Woodlands In and Around Tour Initiatives (WIAT) developments have seen mountain bike routes being developed in the Central Belt and around tours ie Pollok Park has recently seen green, blue and red trails developed. The developments aimed at improving social inclusion, health and access for all;

- Future mountain bike-related strategies will increasingly promote social inclusion and the health agenda particularly in the Central Belt of Scotland re high population catchment and high areas of social / economic deprivation;
- The Forestry Commission are forming the view that the future development of key forest areas must provide sustainable facilities for all ie developing a variety of facilities which can be used by different user groups ie cyclists, walkers, horse riders etc;
- Few families or groups with lower skill levels currently use purpose-built facilities although the market is growing. This market prefers the traditional forest cycling product;
- Additional monies are being sought by FCS to make key mountain bike venues, Glentress and Fort William, truly world-class. This strategy should be applauded as it will ensure that Scotland is at the forefront of trail and product development in the future;
- This strategy also helps underpin the international events which Scotland has secured in the mountain bike arena as well as the attractiveness of Scotland as a mountain bike destination for visitors, particularly the English market;
- Scotland has been very successful in the international mountain bike arena. Over the last three years the Fort William (Nevis Range and Leanachan Forest) has secured an annual round of the World Cup Mountain Bike Series. The venue provides international competition for three mountain bike disciplines: Downhill, Cross-Country and 4-Cross. In addition the area also attracts local club / charity and Scottish and British rounds of the Downhill Series;
- Downhill and 4-Cross events tend to be spectator events while cross-country attracts participants and immediate family, friends etc;
- Scotland will host the Downhill Mountain Bike World Championships in 2007;

- FCS view future development of ‘off-road’ single track cycling under the following three categories of scale: national, regional and local importance. A description of each and key cycling destinations that fit the criteria are highlighted in the table below. In the main body of this report this classification has been explored in more detail and added to by the consultants.

PURPOSE-BUILT SINGLE TRACK CENTRES – CATEGORIES AND DESCRIPTION		
Category	Description	Destination
National	Renowned facilities built to internationally-accepted standards and of national significance (rural economic development / world-class).	<ul style="list-style-type: none"> • Glentress; • Fort William.
Regional	Regional facilities which support / augment existing tourism infrastructure).	<ul style="list-style-type: none"> • Laggan Wolfrax; • Pitfichie; • Craigvinean (when developed).
Local / Community	Community facilities (social inclusion / health agenda / rural economic development) promoting wider access opportunities. Including urban woodlands / parks, forests in rural communities volunteer-driven.	<ul style="list-style-type: none"> • Learnie Forest – Inverness, Black Isle; • Kirkhill – Aberdeenshire; • Fochabers – Moray.

2.3 Other Relevant Bodies

Scottish Cycling (Formerly Scottish Cycle Union)

Scottish Cycling is cycling’s governing body in Scotland and affiliated to British Cycling.

Scottish Cycling is supported by a club structure. There are currently 150 cycle clubs affiliated to Scottish Cycling and 2,300 individual members. Whilst the majority of these clubs support road and track cycling there is a growing mountain bike interest and most clubs have a mountain bike section. Individual membership benefits include insurance and race licences.

Scottish Cycling also administers and control accredited cycle training courses:

- Cycle Trail Leader;
- Mountain Bike Leader.

At present there are about 400 qualified group leaders. These courses are focused for the outdoor education field.

Scottish Cycling also supports the Scottish Cross Country Association (SXC) and the Scottish Downhill Association (SDA) and their one-day event series. The Scottish Downhill Association events attract about 300 to 350 riders and are at capacity with competitor lists now close two to three weeks prior to each event.

Scottish Cycling is also involved in youth development working with local clubs on their Gears development programme.

The Gears programme is broken down into seven coaching areas. Areas one to four focus on control skills and are aimed at Primary Five and Six prior to Cycling Proficiency administered by Cycling Scotland.

Scottish Cycling is also trying to develop the performance end of the sport through the development of Regional Academies. The aim is to get at least seven regional academies by 2012. Each regional academy will have a key cycling focus and include the wider range of cycling disciplines as follows:

- Road;
- Velodrome (small velo parks will be developed at regional academies);
- BMX;
- Mountain biking.

The proposed regional academies are as follows (the first three are now operational):

- West of Scotland, Bellahouston Park, Glasgow;
- East of Scotland, Meadowbank, Edinburgh;
- Tayside, Caird Park, Dundee;
- Highland Scotland, Nevis Range / Leanachan, Fort William;
- Scottish Borders, Glentress, Tweed Valley;
- Central Scotland, Stirling;
- Grampian, Aberdeen.

Glenmore Lodge, which offers cycle leadership courses, has developed mountain bike skills trails for tuition purposes.

British Cycling believes the costs to invest in providing a British Olympic Cross-Country Championship are too great with too many variables so the return is likely to be riskier than with other forms of cycling and as a result not really worth investment at the highest performance level.

Sportscotland

Sportscotland is the national body for sport development in Scotland. Its goal 'is to see more people participating in sport and enjoying its benefits'. Sportscotland work with public, private and voluntary organisations to achieve this goal.

Sportscotland runs three national sports centres including Glenmore Lodge, Europe's leading outdoor centre. The centre includes a newly developed mountain bike training track divided into seven sections, each targeting a particular riding skill including as many features as might be encountered on a full size circuit.

The track will provide a valuable training facility for riders and allow tutors to teach a wide range of riding skills from grassroots to elite level. The track will also be used as part of Scottish Cycling's Scottish Mountain Bike leadership scheme, as well as by Scottish squad riders for specialised training in the run up to the Commonwealth Games in Melbourne and the Mountain Bike World Championships in Fort William in 2007.

This new centre will strengthen the international reputation of Scotland as one of the World's top destinations in the World for performance and leisure mountain biking.

Sportscotland are keen to widen the opportunities for people to participate in cycling and see it one day becoming a recognised mainstream sport. The main approach to this target is greater involvement with local schools and furthering links to Local Authority sports development plans / strategies ie Go Ride Scheme / Safety on the Road / Bellahouston Park developments etc.

Cycling Scotland

Cycling Scotland is the National Cycling Body for Scotland. They work alongside many partners to assist in the organisations objectives ie health, traffic safety, tourism, economy etc. It is directly answerable to the Scottish Executive. Cycling Scotland's vision is 'To establish cycling as an acceptable, attractive and practical lifestyle option'. Its goals are:

- To promote public space that encourages healthy living;
- To promote health benefits of cycling;
- To promote economic and sound benefits of cycling;
- To encourage cycling as an effective practical and sustainable transport option;
- To establish cycling as a solution ie extends choice / access.

Cycling Scotland aims to meet these objectives through a number of techniques. One of the most crucial aspects will be through education. They claim to make sure every Scottish school will offer training in cycle skills, route planning, road safety and the benefits of cycling. Currently 64,000 Scottish schoolchildren register per annum although only 30% complete the course. Cycle Training proficiency is a tool used to encourage a healthier nation, less traffic congestion, safer more pleasant streets and a stronger economy.

Cycling Scotland is currently developing a network of accredited centres and tutors for the local delivery of cycle training, instructor training and other courses. The courses are believed to make trainees more confident and recent surveys suggest that as a result of Cycle Scotland Training a 50% increase in the number of journeys made over three miles was recorded.

The public body are also keen to support / promote events such as Pedal for Scotland and are involved in providing opportunities for the public to come and try cycling at various events throughout Scotland.

3 BENCHMARKING

3.1 Introduction

As part of our remit for this research study, TRC benchmarked mountain bike opportunities in West and Central against all existing purpose-built mountain bike trail facilities in Scotland in the relevant regional reports. In Appendix V we provide wider benchmark examples of single track purpose-built cycle developments in England, Wales, Northern Ireland and North America. These benchmarks are provided as added value to this study and ensure clarity re current market climate / product development and awareness / updates of any future opportunities for cycling development.

Thumbnails, in tabular summary format, of key Scottish forest benchmarks in Scotland are as follows. This helps the reader to understand the existing mountain bike product development in Scotland.

THE 7STANES (SCOTTISH BORDERS / DUMFRIES AND GALLOWAY)

Product Provision

- Includes eight purpose-built mountain bike venues in Southern Scotland, spanning across the heart of Scottish Borders and Dumfries and Galloway from Kirroughtree in the West to Innerleithen in the East;
- Over 25 trails across the eight sites with gradings from novice to expert;
- Glentress has seen recent development of a new interpreted skills loop;
- Signature trails at each venue built first to internationally-accepted standards – the £2 million Phase I developments are now largely complete. Phase II plans are in place largely targeting entry level cyclists. Funding has been secured and development is expected to be completed by 2007;
- Glentress has dedicated but temporary central facilities although these are about to be redeveloped – support facilities at many other sites are required / recommended as part of the Phase II developments;
- Kirroughtree is being developed as a family centre, it has facilities for shared forest use (cycling, walking, fishing, etc);
- 7stanes is becoming an established South of Scotland cycling brand synonymous with good quality trails;
- Product has wide links to service infrastructure – accommodation, attractions, etc.

Production Description and Summary

- Scotland's 'biking heaven' is dominated by Glentress – a world-class purpose-built cycling facility with between 150,000 and 250,000 visitors per annum;
- Glentress is a firm favourite with novices, mums / dads and kids as well as intermediate and experienced riders;
- Built up an excellent reputation nationally and internationally amongst aficionados / enthusiasts;
- Glentress voted best UK mountain bike centre for 2004 by Singletrack magazine;
- Peebles is a recognised cycling service destination;
- Blue and green routes will be added in the Forest of Ae to attract a higher proportion of users;
- Demand for Kirroughtree is growing rapidly due to the quality and nature of all its trails blue, red to the signature black and features such as 'McMoab'. Word of mouth marketing and personal recommendation is key;
- Word of mouth recommendation has been a key marketing medium for 7stanes product / brand;
- Market base – day visitors from Central Scotland and overnight visitors / weekend breaks from further afield, particularly North of England;
- Recognised and very good website with up-to-date information on routes and links;
- Exciting and highly successful product with further growth envisaged.

LAGGAN WOLFTRAX (LAGGAN)

Product Provision

- 18km of trails opened on 27th September 2004 in the Cairngorms National Park;
- A 6km 'double black grade' is a tight single track trail with serious drop-offs in use for only the very experienced cross-country riders;
- A 6.6km 'red grade' trail for intermediate riders is graded as difficult with many built-in features to test the intermediate bikers' skills;
- A 3.2km 'blue grade' trail / 'fun park' trail with uplift provided at weekends or as and when requested;
- The site also includes a café, toilets and changing rooms in a purpose-built service centre. BaseCamp MTB provides everything you will ever need for a day in the forest and includes cycle hire, repair shop and car park facilities.

Production Description and Summary

- The future strategy is to develop a rounded forest product for visitors, with walking routes, horse riding and nature / wildlife appreciation facilities and more entry level cycling possibilities;
- No cyclists used this forest previously – Laggan Wolftrax is a complete supply-led project;
- First year usage envisages up to 30,000 visits / riders per year;
- Laggan Wolftrax has already built up an excellent brand and awareness levels are high;
- Laggan has had an excellent introduction as a key single track cycling venue in Scotland.
- However in reality the existing facilities are rather limited given the nature of the routes. Essentially this is a half-day experience. The venue is very well received by riders who like to 'session' short routes / sections;
- Given uplift facilities and the downhill venue at Fort William this route is being used by freeriders and downhillers on big bikes. It is being seen as a complementary facility to Nevis Range.

LEARNIE FOREST (BLACK ISLE)	
Product Provision	<ul style="list-style-type: none">• The aim is to develop a local cluster of 'off-road' cycling facilities at Learnie Forest;• Planning permission was granted for a network of routes (three) covering all levels of expertise – development of Phase I is nearing completion due to fully open Spring 2006;• Trails include a red, blue, and black development and a fun park with large berms and tabletop jumps;• A dirt jump course is also proposed;• Access will be available from near the existing forest gate and car park on the A832.
Production Description and Summary	<ul style="list-style-type: none">• Originally trails were developed in Learnie Forest by volunteers;• A more formally developed facility will ensure public safety, avoid conflicts between different types of forest users and ensure ie horse riders / mountain bike cycling does not damage other forest elements or enjoyment for other users;• Developed is in joint collaboration with HIMBA (bike club) and local community organisations;• £71,000 funding successfully secured from EU funding. In total £159,000 has been raised for Learnie's purpose-built forest cycling developments which are currently under construction;• It is hoped the facility will bring in visitors from outside the area and generate new jobs;• Seek to build and capitalise on the opportunities / benefits that a recognised off-road cycling destination would have on the local / Inverness area.

THE WITCH'S TRAILS (FORT WILLIAM)

Product Provision

- 25 miles of waymarked cycle routes graded from novice to expert – open all year round;
- Located three miles North East of Fort William on the A82 at Torlundy;
- It is one of the few venues in the World where Downhill / Cross-Country and 4-Cross Championships can be held together;
- The world-class Witch's Cross-Country Trails are open all year for cross-country enthusiasts. The World Cup Cross-Country circuit is a two-hour lung-busting trail, which includes forest roads, boardwalk sections and single track with optional special 'black' sections. Consultants have noted that significant ongoing investment is required to sustain the existing Witch's Trails network;
- Facilities include chairlift and bike hire (seasonal only), café, toilets and large car park;
- Trailquest was a 28 miles trail made up of a number of different grades and routes. This bicycle orienteering area was introduced for families but is understood not really to have been a success and has been informally withdrawn. In fact this form of cycling provision has been withdrawn from most forests throughout Scotland – the exception to this being Arran (see Arran Adventure Company);
- Other facilities include chairlift and bike hire (seasonal only), café, toilets and large car park;
- Home to the World Cup Downhill course administered and managed by Nevis Range;
- The World Cup Downhill course is open to the public from May to early September each year and attracts about 4,000 visitors a year.

Production Description and Summary

- Recognised national cycling centre with an established international reputation / brand already in place. Opportunity to develop and build on this and on the back of hosting the 2007 World Championships. Opportunities re awareness / marketing and promotion;
- UCI World Cup Series held in 2005 attracted over 20,000 spectators;
- Key cycling events at Fort William have a significant economic impact for the local area;
- Future plans include extending the Witch's trails network, improving mountain bike car parking, increasing events space and developing a red graded downhill trail.

THE 10 GLENS (FORT AUGUSTUS etc)

Product Provision

- This area has seen numerous trails developed, and linked together as a network of waymarked cycling routes connecting Fort Augustus and Inverness (see Great Glen Cycle Way);
- New routes have been developed with community backing, FCS approval and the appetite of mountain biking groups ie HIMBA, SLAM and the 10 Glens Mountain Biking Group;
- A total of between 100km and 200km of single track development is the project's long-term aim supported by a wider network of forest roads and trails;
- A large public partnership is involved in these developments. It is hoped that it would be of similar scale to the one formed by the 7stanes project team, for example it would include SNH, Local Enterprise Company, Council etc. At present, however, it is really just a marketing tool.

Production Description and Summary

- The 10 Glens is a far-reaching public partnership which includes many bodies from throughout the 10 Glens;
- Aim is to develop sustainable cycling projects, attract tourists and generally raise the profile of the 10 Glens area;
- The long-term aim for the 10 Glens would be to develop a cycle route / trail in each of the 10 Glens – including key centralised facilities;
- EU funding and additional public sector funding is ongoing. A sum of between £100,000 and £200,000 is sought (which, in the consultant's opinion, is a very small amount of funding for this ambitious project).

KIRKHILL (DYCE)
<p>Product Provision</p> <ul style="list-style-type: none"> • The forest has a traditional waymarked cycle route on the existing forest road network; • The recently developed fun park has helped to increase visitor numbers (cyclists) to 3,500 per month. On the whole the fun park has been well received and is boosting cycling usage in the forest significantly; • Forest is also home to many unregistered / informal tracks used by the public.
<p>Production Description and Summary</p> <ul style="list-style-type: none"> • Known locally as Aberdeen's Wood. It is located 2km to the West of Dyce Airport and about 10km to the West of Aberdeen along the A96; • The forest is currently subject to severe visitor pressures. The forest is heavily used by vehicles, casual cyclists, dog walkers, runners, mountain bikers, horse riders, schools and education groups; • Capital funding of £150,000 has been earmarked for cycle development at Kirkhill to be spread over the next three years; • Fully inclusive – access for all, building social inclusion initiatives and partnerships is the strategic position / objective for Kirkhill Forest.

FOCHABERS (MORAY)
<p>Product Provision</p> <ul style="list-style-type: none"> • Incorporates three forests, each with its own car park facilities to service walkers and cyclists alike; • 17km of purpose-built single track have been completed or nearly so. A further 9km of trail is proposed and expected to be complete by April 2006; • The trails utilise 16km of existing forest roads for cycle ascents. When complete, the trail development at Fochabers will total in excess of 42km of signed cycle trails; • Issues of ongoing trail management and quality control must be addressed re sustainability.
<p>Production Description and Summary</p> <ul style="list-style-type: none"> • Designated local cycling centre for the communities of Fochabers, Elgin and Keith; • Consultants recognise it as a 'blueprint' for future volunteer partnerships; • The forest areas have a number of attractive 'points of interest'; • Cycle development evolved via local youth enthusiasm. Moray MTB in partnership with local FCS are the vehicle to developing further trails, managing volunteers and ensuring trail building standards and sustainability are equally high; • Existing trail development cost has been very cost-effective in part due to volunteers but also due to soil / mineral composition; • Social inclusion and health are important drivers of the project re funding.

3.2 Summary of Future Single Track Mountain Bike Trail Development in Scotland

The previous benchmarks help to clarify and confirm the existing position / ‘state of play’ with regard to purpose-built single track cycle developments in Scotland. In this sub-section consultants go on to summarise future developments / plans as at present for single track cycling in Scotland. (Note: this section has been prepared after 7stanes and Northern Forest field trips and discussions, but before consultant’s recommendations re future product developments for these forestry / areas. Our findings are as follows:

SUMMARY OF FUTURE SINGLE TRACK MOUNTAIN BIKE TRAIL DEVELOPMENT IN SCOTLAND		
Forest / Area	Future Developments	Development / Completion Dates
The 7stanes (Scottish Borders / Dumfries & Galloway)	<ul style="list-style-type: none"> Detailed scope, fund and complete Phase II by end of 2007; Aim to widen market base – make more inclusive; Extend trail network. Add more entry level and skills development products; Provide future interpreted skills development areas. Links to cycle clubs / user groups; Add sustainable supporting facilities, where possible – create commercial business opportunities; Improve signage / strengthen brand; Link to wider attractions / forest use; Develop marketing strategy that will broaden market appeal. 	<ul style="list-style-type: none"> Phase II development not started; Funding application process ongoing; Completion date for Phase II anticipated in 2007.
Laggan Wolftrax (Laggan)	<ul style="list-style-type: none"> Assess trail use in Phase I ie success / growth; Link cycling with other forest uses, walking, horse riding / outdoor activities etc; Scope a Phase II development depending on Phase I demand / success – Post 2006; Possibly extend red route and add entry level green route. 	<ul style="list-style-type: none"> Phase I complete; Considering Phase II development on back of market demand re Phase I successful.

SUMMARY OF FUTURE SINGLE TRACK MOUNTAIN BIKE TRAIL DEVELOPMENT IN SCOTLAND (Cont'd)		
Forest / Area	Future Developments	Development / Completion Dates
Learnie Forest (Black Isle)	<ul style="list-style-type: none"> • Development of three trails 2005 / 06; • Blue, red and black trail designed loops; • Design will include moderate, difficult and severe sections of trail; • Consideration given to other users, particularly horse riders; • Dirt jump area being actively considered; • Technical timber sections will be developed; • Total length of purpose-built trails will be 11.5km in addition to two 0.5km of out and back routes; • Include sections of forest road re linking. 	<ul style="list-style-type: none"> • Phase I development nearing completion 2005 / 06; • Opportunities to develop product further re Phase II development; • Make Phase II of project more accessible to wider market base.
The Witch's Trails (Fort William)	<ul style="list-style-type: none"> • Recognise need to upgrade / develop World Championship facilities on the back of the 2007 event opportunities; • Extending car parking and event space; • Add greater trail network and links for wider market uses; • Significant level of upgrading / investment required. 	<ul style="list-style-type: none"> • Ongoing development at present; • Need to develop / improve trails in run up to 2007 (Fort William Championships).
The 10 Glens (Fort Augustus)	<ul style="list-style-type: none"> • The focus is the region and the 10 Glens. Aim is to develop a network of waymarked mountain bike routes; • Increase overnight visitors to the area; • Develop centralised 'Hub'-style facilities where possible; • Plan and support a number of Highland regional events; • To develop, manage and promote a network of world-class mountain bike trails in the region. 	<ul style="list-style-type: none"> • Ongoing objective to identify, develop and manage mountain bike trails in Highland Scotland; • Currently really just a marketing ploy to promote mountain biking in the region.

SUMMARY OF FUTURE SINGLE TRACK MOUNTAIN BIKE TRAIL DEVELOPMENT IN SCOTLAND (Cont'd)		
Forest / Area	Future Developments	Development / Completion Dates
Kirkhill (Dyce, Aberdeen)	<ul style="list-style-type: none"> • Localised Aberdeen City focus (local centre); • Cross-country intermediate red to be developed; • Route will include some beginner / novice level trail ie blue – to maximise social inclusion and widen access opportunities for all in Aberdeen; • Incorporate network of advanced (black) cross-country sections; • Manage and upgrade informal / unpoliced trails; • No centralised facilities to be developed re security and maintenance and sustainability issues; • Will not attract tourism market, only visitors to friends and relatives. 	<ul style="list-style-type: none"> • Development ongoing; • Have a five year development plan in place; • £150,000 of capital expenditure over the next three financial years.
Fochabers (Moray)	<ul style="list-style-type: none"> • Focus for advanced riders, enthusiasts, as well as novices / beginners / family / social inclusion markets; • Develop a red / black skills areas; • Complete the Gully Monster, increase trail sustainability; • Create blue route network for beginners linked to Ordiequish green sections; • Develop new car park, add shelter at strategic points and viewpoints; • Add to existing product re expand network and link skills areas / route augmenting; • Additional trail building cost of £34,000; • Picnic area facilities. 	<ul style="list-style-type: none"> • Phase I completed; • Phase II development ongoing for completion 2006.

SUMMARY OF FUTURE SINGLE TRACK MOUNTAIN BIKE TRAIL DEVELOPMENT IN SCOTLAND (Cont'd)		
Forest / Area	Future Developments	Development / Completion Dates
Pitfichie (By Alford)	<ul style="list-style-type: none"> • Five year trail development plan – to be developed in six sections; • £100,000 of FCS funds have been secured. Partnership funding sought; • Will develop a wider network of trails at various market levels to maximise market opportunity and widen the market base; • Links to service facilities re toilets, café, changing rooms etc ie Monymusk village; • New car park proposed; • Create second red loop (16km), a blue loop (8.7km) and double black cross-country (2.4km); • Links to Monymusk village and the Estate integral to the development success. 	<ul style="list-style-type: none"> • Next development phase to be assessed; • Development ongoing; • Create links to walking at Benachie and other recreational opportunities.
Craigvinean Forest (Dunkeld)	<ul style="list-style-type: none"> • Development of regional mountain bike centre; • Target markets are families, groups, activity providers; • Route development green / blue network and fun park; • Red cross-country with links to existing forest road network; • Facilities utilised by range of markets including walkers and mountain boarders (dedicated mountain board track proposed); • Central facilities, café, car park, changing rooms, toilet, shelter; • Links to Hermitage and other walkers / forest recreation uses will ensure centre sustainability; • Development plan proposed in three phases; • Currently Phase I is under consideration; • Trail design has been prepared by Pete Laing. 	<ul style="list-style-type: none"> • No development as yet; • Strategic and development plans in place. Development anticipated in the near future.

SUMMARY OF FUTURE SINGLE TRACK MOUNTAIN BIKE TRAIL DEVELOPMENT IN SCOTLAND (Cont'd)		
Forest / Area	Future Developments	Development / Completion Dates
Golspie	<ul style="list-style-type: none"> • £300,000 development proposed; • Development / construction started 2005; • Proposed network of single track trails; • Development in partnership with private estate and FCS input. 2005 start date, Phase I completion 2006; • Routes to include downhill, cross-country black / red and skills area. 	Phase I development ongoing.
Carbisdale	<ul style="list-style-type: none"> • Two single track cycle trails being built currently; • 5.5km of red and blue single track proposed; • Link single track sections to existing forest roads to form two larger trails; • Trails will be developed in conjunction with Balblair Forest proposals. 	Trails completed October 2005.

4 MARKET SEGMENTATION

To date the first phase of development at most purpose-built mountain bike sites has been supply-led (the 7stanes and Laggan Wolftrax developments are two prime examples of this). Signature trails have been developed, marketed by word of mouth, by enthusiasts, aficionados and then a further network of trails built on the back of those initially developed routes.

In the future there is a danger that individual sites may compete with one another if product and market differentiation is not undertaken and development controlled. Supply of facilities could outstrip demand as displacement begins to become a more visible problem. However, with the 7stanes Phase II development visitors have been asked the type of facilities they would like to see added to the core product. At Glentress the new visitor facilities will only be finalised after user consultation.

At present the mountain bike market has not been properly segmented and this requires some consideration with links established between future market requirement and product development. Markets and products can be segmented in a number of ways, by:

- type of user;
- skill level and technical ability;
- time – pattern of use;
- geographical location;
- user motivation – thrill seeker / fun factor;
- experience required;
- age, sex;
- type of visitor – day, short break, holiday tourist etc;
- group, individual etc.

The Welsh have segmented their market by trail user group and TRC suggest a similar segmentation system for Scotland, West and Central Scotland developments should be in line with this. Indeed the matrix overleaf suggests a market segment breakdown and shows: a description of each segment; their broad skill level; likely experience dwell time; and the type and grade of route to be developed.

MOUNTAIN BIKE MARKET SEGMENTATION

Market Segment	Description	General Skill Level	Dwell Time	Route Type	Route Grading
Novice / Casual Cyclist	New or limited 'off-road' cycling experience, taster activity sessions, provide other wider activities / entertainment in the forest, link to local attractions.	Low	1 / 2 hours	Gentle, short ascents / descents, rest areas, forest roads, wider single tracks, few obstacles / 'chicken runs', café, toilets.	Green / Blue
Family / School / Youth Group	Mixed ability groups, opportunity to improve skills, training, safety an important issue, objective setting.	Low / Moderate	2 / 3 hours	As above but additional obstacles and moderate safe thrills options, more and narrower single track for more advanced members / 'chicken runs', skills areas, jump parks, fun, tuition.	Green / Blue / Red
Enthusiast	Various skill levels, keen to ride signature trails, trail baggers, includes high skilled group that love obstacles, drop-offs, have all the latest kit, like to be seen.	Low / Moderate / High	2 / 4 hours	As above but need signature trails, like comfort of manmade trails, graded skill parks, bike shop – meeting place to be seen ie café.	Blue / Red / Black
Cross-Country / Epic	Love long routes, own navigation, solitude, nature, challenge, miles of connecting loops with natural features such as river crossings, arduous sections of technical and physical challenge.	Moderate / High	4 / 6 hours	Tend to cycle in wilderness, will utilise manmade trails to connect long cross-country routes, no central facilities necessarily, would use if available – self-sufficient.	Red / Black
Downhill	Specialist downhill bikes, sophisticated specialist equipment, very steep descents, large obstacles, 'gravity junkies', need uplift system to prevent pushing heavy bike uphill, body armour.	High	2 / 3 hours	Specialist downhill course, highly specialised, big drop-offs, technical difficulty, rock sections, steep.	Black / Double Black
Sprint	Competition-based riders, cross-country focused.	High	1 / 3 hours	Short, steep cross-country course, technically / physically, difficult sections.	Black / Double Black
Trials	The outer parameters of mountain biking. Trials is as much akin to BMX cycling as it is cross-country mountain biking – for high adrenaline riders only.	Very High	1 / 2 hours	Short, sharp very high octane type development – technically very difficult constructed trials North Shore etc.	N/A – specific / individual designs only
Freeride	A growing but 'extreme' sector of the sport – high adrenaline, fun orientation, session riders.	Very High to High	1 / 2 hours	Short, sharp riding and adrenaline, drops / berms, tabletops, North Shore, riders session, parts of downhill / cross-country courses, fun / jump parks.	Fun / Jump Parks – Red to Double Black

5 STRATEGIC POSITIONING

5.1 Introduction

FCS is in the process of developing a strategy for forest cycling on the National Forest Estate. However what is 'generally' agreed by all in the organisation is that the development of purpose-built 'off-road' single track cycling centres must fall under one of three broad categories (as highlighted in Section 2). These are:

- (1) National;
- (2) Regional;
- (3) Local / Community.

The consultants concur with the broad development positioning categories being considered by FCS. The categorisation and strategic positioning will help to provide a guide to the scale of development and the expenditure required, based on the range and mix of markets that each type of centre will attract.

The consultants believe it is important to provide a clear definition of the cycling centre 'types' to help guide and inform future development. The consultants suggest that the 'off-road' cycling forest centres definition should be based on the following criteria:

- Geographical focus – ie only one regional centre in each predefined area, to minimise displacement and market demand overlap;
- Types of centres must relate to the size / scale of market catchment – demand potential / opportunity;
- The suitability and topography of the site must be considered as this may limit certain types of trail development and limit sustainability;
- The forests' alignment to other leisure and recreational provisions in the areas ie linkages;
- The range and type of cycle markets to be attracted should be taken into account – novice / intermediate / advanced;
- The range of trail types and level of 'central facilities' provision which can be supported must be considered;
- The level of economic benefit ie local, regional, national and importance to a local area / sub-region should be assessed;
- The ability to attract overnight tourist visitors as well as local residents is an issue for appraisal.

Based on the above strategic issues, TRC consultants have prepared criteria to help categorise the strategic development of purpose-built ‘single track’ cycle centres throughout Scotland. In the case of our West and Central Scotland examination the criteria was set against the 30 individual forest areas under scrutiny, and conclusions formulated re national, regional and local centre (TRC undertook this methodology for each of the 30 forests being examined).

5.2 National Centre – The Criteria

Below is highlighted, in tabular format, the product and market criteria within which a national cycling centre / destination must ‘fit’:

National Centre – The Criteria	
Products	<ul style="list-style-type: none"> • At this stage it is proposed that there will only be two national centres: <ul style="list-style-type: none"> - Glentress / Innerleithen (Peebles) – Tweed Valley Forest District; - Leanachan Forest (Fort William) – Lochaber Forest District. • A national centre should have one or more signature trails which have developed their own sub-brand and market following ie Witch’s Trail, Helly Hansen V Trail; • A national centre should be able to stage national and ‘world-class’ events, attracting participants and <u>spectators</u> from outside Scotland ie World Championships – Fort William; • The trail development should be ‘cutting edge’. The trails should be developed and maintained as ‘world-class’; • A national centre should have a full range / network of trails to satisfy demand at all market levels ie: <ul style="list-style-type: none"> - green trails for novices / casual / social inclusion market; - blue trails for novices / beginners / families; - red / black cross-country trails for enthusiasts / cross-country / specialists; - specialist downhill routes with uplifts; - specialist competition routes – purpose-built obstacles augmenting existing trails; - fun parks and graded skills areas; - links to a wider range of cross-country trails, tracks, loops and long-distance excursion routes – see National Cycle Network. • A national centre should have a wide range of central facilities including: <ul style="list-style-type: none"> - changing facilities and toilets; - café with indoor and outdoor seating; - bike shop and bike hire; - shelters and point of interest along lesser trails; - possibility to provide / arrange tuition; - ability to accommodate groups; - uplift – fixed or vehicle for downhill or children’s cycle transport. • A centre of national importance specialising in one individual product could evolve over time ie downhill / extreme freeride centre etc.

National Centre – The Criteria	
Markets	<ul style="list-style-type: none"> • A national centre must be accessible to <u>all market levels</u> ie disabled, social inclusion, novices / beginners, families, enthusiasts, experienced riders etc; • A national centre should have a dedicated mountain bike ranger, an integral part of the trail system management / maintenance regime and also a key customer interface – link to education local groups, clubs etc; • The facilities should be attractive to overnight visitors, in particular be attractive to short break tourists from outside Scotland; • Promote use of the forest and links to other markets: walkers, horse riding, fishermen etc; • A national centre should have a high local resident and / or overnight visitor catchment population thus enabling central facilities to be sustainable; • A national centre should promote links to local businesses to provide necessary tourism infrastructure; • A national centre should be positioned as a ‘must-see’ attraction, which will warrant its own sub-branding / market; • A national centre should maximise economic benefit at both a regional and a national level; • A national centre should be positioned as a vital ‘cog’ in Active Scotland VisitScotland’s product portfolio; • Attract new / additional markets to rural areas – therefore in many cases contrasting with market norms ie Dumfries and Galloway traditionally attracts an over 45 market; • A national centre must be market-led – not product / supply-led.

5.3 **Regional Centre – The Criteria**

Below are the product and market criteria that a regional cycling centre / destination must ‘fit’ with:

Regional Centre – The Criteria	
Products	<ul style="list-style-type: none"> • A regional centre should have a signature trail which should develop its own sub-brand. A signature trail need not necessarily always be at an intermediate / advanced skill level (ie red or black) – but should complement centre positioning, markets attracted etc; • A regional centre must have both cross-country and downhill type trails and appeal to a range of markets with various skill levels; • A range of fun park / skills areas may be included; • Well targeted central facilities should be incorporated. These should be provided on site if sustainable, or alternatively close to the centre through linking of existing businesses; • Onsite facilities, if sustainable, may include small café / refreshment facility, changing rooms, toilets and shelters. A full range of cycle retail is unlikely to be incorporated, only essential repair / spares offered by the café. Limited cycle hire may be offered.

Regional Centre – The Criteria	
Markets	<ul style="list-style-type: none"> • A regional centre must be accessible to a <u>wide range of markets</u> of various skill levels; • A regional centre should have a large local resident catchment population within a one-hour drive time; • A regional centre must be attractive to overnight visitors from outside the region for short breaks – this includes visitors to friends and relatives; • It is envisaged that the central facilities will be used by other forest users, and in fact this may be essential to ensure central facility sustainability; • The regional centre will create local and regional economic benefit due to both local resident and short break visitor demand; • The regional centre will attract regional and Scottish level series events (ie cross-country and downhill). Will attract competitors from outside the region, but few spectators; • The regional centre will need to develop good links to local businesses – accommodation, attractions and other activities to provide essential visitor infrastructure to enable the promotion of short breaks ie linkages are fundamental; • The regional centre is driven by FCS in partnership with other organisations / local business etc.

5.4 Local Centre – The Criteria

5.4.1 Introduction

The consultants are of the opinion that there are three main reasons / purposes for developing a local centre: for volunteer cycle enthusiasts (Type A); wider access / inclusion for all (Type B); and for tourism purposes (Type C). Each type of centre is equally valid, but each will have different trails / style designs etc. It is quite possible that a local centre might evolve to satisfy Type A, Type B and Type C roles. The consultants define the three types of forest cycling centre below.

5.4.2 Local Centre – Type A – Volunteer Enthusiasts

Local Centre (Type A) Volunteer Enthusiasts – The Criteria	
Products	<ul style="list-style-type: none"> • In local centres, the trails tend to be developed / finished / maintained by volunteers with assistance, management and quality control from FCS; • The trails tend to be built for the volunteers 'own use' ie facilities developed for enthusiasts; • The trails tend to be specialist / niche ie a limited market focus; • The more limited trail development tends to be more extreme, longer, harder obstacles and more challenging; • There will be no central facilities at a Type A local centre – they will not be sustainable. Car parking, shelter and limited skills areas will be provided.

Local Centre (Type A) Volunteer Enthusiasts – The Criteria	
Markets	<ul style="list-style-type: none"> • The centre is driven and controlled by FCS in partnership with local volunteers / cycle clubs / enthusiasts; • Perhaps only a small number of local residents live within a one-hour drive time of a local centre; • There is potentially a high number of repeat visits from a small population base; • Continuity of demand may be an issue as initial volunteers move away out of the area. There is a need to continually refresh the volunteer base to ensure trail usage and cost-effective maintenance etc; • The local centre will attract fewer short break visitors, but the visiting friends and relatives (VFR) market may create some overnight visitor demand; • A local centre (Type A) will create local economic benefit which may be essential to a more fragile rural area.

5.4.3 Local Centre – Type B – Wider Access / Inclusion for All

The main reasons / purposes for developing a local cycling centre based on social inclusion and wider access opportunities are as follows:

Local Centre (Type B) Wider Access / Inclusion for All – The Criteria	
Products	<ul style="list-style-type: none"> • This type of local centre re product development must be accessible and practical to all and must be especially inclusive; • This centre should offer an ideal introduction to mountain biking with wider, shorter, easier trails, shallow inclines and rest points etc; • This centre should offer trails with views, points of interest and other attractions en route. The ‘explorer’ concept is ideal in this type of centre (see Moray Forests); • An overall positive forest mountain bike experience is the driver in this type of centre rather than the emphasis on trail difficulty, obstacles etc; • This type of centre would have no central facilities apart from car parking / shelters (for picnics etc) as they would not be sustainable; • Small, well-focused skills areas may be included, which would aid with mountain bike skills training / confidence building.
Markets	<ul style="list-style-type: none"> • The Type B local centre is driven by FCS in partnership with other agencies for social inclusion, health agenda or other community access reasons; • This local centre will attract mainly novice / beginner markets ie schools, youth groups, socially disadvantaged and families; • This centre will attract predominately a local resident / <u>group</u> market within a one-hour drive time of the centre. Overall travel time and ease of access via suitable transport is an issue for this market; • The dwell time of visitors to this local centre will be short – less than two hours; • This type of local centre is unlikely to attract many overnight short break visitors unless linked to other activities in the wider area; • Schools, youth groups etc who would utilise this centre would be accompanied by a qualified mountain bike trail leader; • This type of local centre will often generate high local resident visitor numbers.

5.4.4 Local Centre – Type C – Tourism

In the following, consultants detail the product and market criteria around which a Type C cycling tourism product would be developed:

Local Centre (Type C) Tourism – The Criteria	
Products	<ul style="list-style-type: none"> • Additional tourism provision for local area; • Community-led development re size, scale; • Help to build cluster of quality tourism facilities in area ie enhance an area's tourism product; • Improve 'destination appeal' of the area; • Opportunities to link with other services, activities in surrounding area; • Product will be user-friendly and service everyone from beginner / novice markets; • Does not require purpose-built central facilities; link to other local attractions in area; • Knock-on benefits for other tourism infrastructure in area re bed stock, food and drink, link to other activities to maximise critical mass etc.
Markets	<ul style="list-style-type: none"> • Tourism visitors re day or overnight should be attracted to this product – includes VFR-driven demand; • Opportunities to attract overnight visitor markets if product has sufficient critical mass of high quality or is well linked to tourism destination; • Improve profile of the area and enhance tourist offering / experience; • Will generate significant local economic benefit due to short break / overnight visitor demand; • Appeal to a broad range of tourist markets irrespective of skill level; • Development will be driven by FCS in partnership with other tourism-related industry both public and private sector; • Perhaps only a small number of local residents live within a one-hour drive time; • Build awareness of wider local area as a tourism destination. Promotion and linkage to wider destination is key; • Market with other similar cycling centres in proximity ie help increase visiting cyclists stay in Scotland / overnight stay credentials.

5.5 Route Cycling Link

From our research and consultation undertaken, TRC consultants have identified a further positioning category for 'off-road' cycling, a through route cycling link. It fits with purpose-built cycle centres and also those forests which are not developed solely as a cycling centre but which play an important role in linking forests / routes, national trails and longer routes together. Listed overleaf are the product and market criteria within which a through route cycling forest will fit:

Through Route Cycling – The Criteria	
Products	<ul style="list-style-type: none"> • The focus of the route will be existing routes and / or tracks already in place – whether local, regional or nationally important ie local heritage trails through to National Cycle Network (Sustrans routes); • Inclined to be accessible to all user groups; • The through route link or loop is the driver of forest cycling rather than a single track cycling facility centre; • This type of product would have no additional central facilities – apart from existing product range; • Pertinent to a successful long / ‘Epic’ route development (see Section 8.5.2); • No competitive event, focus could be charity, excursion type event; • Single track and waymarked trails could both be used.
Markets	<ul style="list-style-type: none"> • Developments will be driven by FCS in partnership with other cycling organisations ie Sustrans as well as community enthusiasm / partnerships etc; • Overnight / tourism market, long-distance cycle excursion and touring markets; • Fit with overnight tourist markets; • Knock-on benefit to tourism infrastructure in surrounding area; • Provide a facility to local (smaller) centres of population; • Offer access to schools, youth groups etc; • Marketing / branding of existing through route will help profile of area; • Will not attract visitors as such but ideal for attracting ‘passing through’ overnight visitors; • Raise profile and awareness of trail. Promotes trail service centre ie local villages for refreshments, repairs, accommodation etc, boosts local economic spend.

5.6 Summary of Strategic Positioning

Highlighted overleaf is a detailed summary of the ‘off-road’ cycling product, its positioning re national, regional and local, and its main markets segments which will ‘fit’ within the product’s positioning. The extent to which a proposed cycling destination ‘fits’ with specific market segments will inevitably determine the size, shape and overall strategic positioning of the forest area.

SUMMARY OF STRATEGIC POSITIONING						
Market Segment	National Centre	Regional Centre	Local Centre Type A	Local Centre Type B	Local Centre Type C	Through Route Cycling Link
Key Markets	All markets attracted – local enthusiasts, cycle clubs, short break tourists, families, groups, schools – wide range of skill levels and abilities.	Wide market base, but not as wide as national centre.	Local enthusiasts / volunteers and cycle clubs.	Schools, youth groups, social inclusion markets.	Short break tourists, overnight visitors, families, groups / societies, activity centre-related.	Nation wide enthusiasts and short break tourists, day visitors, excursionists touring cyclists, adventurers. Likely to use cycle trails frequently.
Overnight Visitors	Attractive to short break visitors from outside the region and outside Scotland.	Attractive to short break visitors from inside and out with the region.	Primarily local VFR-driven.	Limited overnight visitor potential from individuals, but some group potential.	Attractive to short break visitors – primarily from out with the region.	Opportunity to benefit from cycle 'stop-offs' during and between day visitors.
Trail Network	Wide network of trails – novice through to advanced, all ranges of skill level required (green to black), cross-country and downhill / freeride, fun park and skills area.	Good network of trails, for mixed ability users, however, range may be targeted to specific markets, skill levels.	Trails built initially by volunteers tend to be niche / specialist for their own use ie technical downhill / freeride / cross-country.	Trails must be novice and beginner focus, short with viewpoints and resting places.	Wide network of trails – must be user-friendly for beginners through to intermediates to promote wider tourism visitation.	Wider range of trails / networks and links.
Signature Trails	One or two key signature trails with dedicated branding and possibly commercial route sponsorship.	One signature trail, may have its own branding – will have key trail signature features.	May or may not have signature trails, but will have key trail signature features.	Unlikely to have signature trails, but points of interest and goals must be built into trail design.	Likely to have various signature trails and scenic views / point of interest to keep visitors interest high.	The route / views / landscape itself is the feature. Other local features within the forest in question could be developed.

SUMMARY OF STRATEGIC POSITIONING (Cont'd)						
Market Segment	National Centre	Regional Centre	Local Centre Type A	Local Centre Type B	Local Centre Type C	Through Route Cycling Link
Events	National and world-class participant and spectator events. Linked to Event Scotland National Events.	Regional participant events, limited spectators.	Local participant events.	Specialist themed events.	Likely to have little in the way of staged events.	Specialised themed events as part of through route – see charity, triathlon etc.
Central Facilities	Full range of central facilities: car park, downhill uplift, café, shop, bike hire, changing facilities, tuition, cycle ranger, shelters and picnic areas and toilets.	More limited facilities – if sustainable, small café and retail provided on site. If not sustainable, provision should be made in local area, no tuition facilities.	Central facilities unlikely to be commercially viable. Car park and shelters only. Toilets assessed on site by site basis.	As local centre type A more shelters and picnic areas provided groups will bring own trained cycle trail leaders.	No purpose-built facilities – but facilities linked to existing attractions / visitor destination / facilities are fundamental.	No centralised facilities, shelters and bothy-style, developments possible along route.
Economic Benefit	Strong links to business sponsorship deals, national and local economic benefit.	Links to local business, good regional and local economic benefit.	Local economic benefit.	Some limited local economic benefit.	Could be significant economic benefit linked to high percentage of overnight stays.	Economic benefit generated from 'stop-off cyclists' re accommodation / food and drink.
Social / Health Benefit	Meets Scottish level social and health agendas.	Regional benefit re volunteers and social inclusion.	Local social benefit re community volunteers.	High social benefit to local community, social inclusion-driven, high local health agenda priorities.	Meets with all UK social and health aspirations.	Significant benefits to all who participate however not assumed to be a mass market approach (see Sustrans).

6 DEMAND AND MARKET TRENDS OF MOUNTAIN BIKING IN SCOTLAND

6.1 Background Statistics

The growth in mountain bike ownership and participation in the sport has surged since the modern mountain bike was invented in the late 1970s early 1980s allegedly by Joe Breeze and Gary Fisher of Marin County, USA.

However people were cycling 'off-road' long before the invention of these modern specialist bikes. In World War II the Japanese used bicycle support during jungle warfare in Burma.

The consultants were unable to discover any national statistics indicating the number of people who use mountain bikes in the UK or take an active part in the sport. However, bicycle ownership in the UK continues to grow rapidly.

In 1995, it was estimated (Bicycle Association) that 35% of all households in the UK owned a bicycle, today it is estimated that almost 40% of households own a bike.

In 1999, the retail value of the cycle market in the UK was £426 million (Bicycle Association) with 2.4 million units sold.

According to Keynote, mountain bike market sales in 1995 were split 60% children's bikes and 40% adult bikes.

In a sports participation survey undertaken by Sports Marketing Surveys in 2001, 5.7% of the UK population participated in mountain biking as a recreational sport. In Scotland, TRC assume this to be nearer 6% of the population.

6.2 2003 Cycling Statistics (VisitScotland)

In 2003, VisitScotland published a report into the importance of cycling to the visitor economy. This included the following quantitative data:

- 100,000 trips were taken by UK residents where cycling was the main purpose of the holiday trip. This resulted in 600,000 bednights and an expenditure of £20 million;
- Of these trips, 32% were Scots and 63% English;
- Holidaymakers who included cycling as part of their holiday (main purpose or not) amounted to an estimated 900,000 trips or 4.8 million bednights in 2003;
- 59% of cyclists travelled between July and September;
- Of these total 'cycling trips', 58% were taken by Scottish residents and 39% by English visitors;
- 'Cycling'-related visitor trips amounts to 8% of all holiday trips in Scotland;
- The average length of stay of 'cycling trips' in Scotland is five nights;
- The average expenditure per cycling trip was £200 which resulted in an average per night of £33;
- Cyclists tended to be aged between 35 and 44 and be in the AB social groupings.

6.3 2005 Cycling in Scotland Research (VisitScotland)

VisitScotland in conjunction with FCS and other affiliated partners recently completed qualitative research into Scotland's cycling market. The aim of the study was to give the client group a better understanding of Scotland's cycling / mountain biking market and to help confirm their future investment and strategic development / marketing decisions. The study provides only qualitative information on cycling characteristics, consumer behaviour and representation from the trade. It should be stressed that there was no quantitative research data gathered as part of that research process.

As part of this research, interviews were held with:

- (i) The Trade;
- (ii) Key Leisure Cycling Segmentations.

A summary of the key findings of this research has been included in Appendix VIII.

6.4 General Market Profile for Purpose-Built Mountain Bike Facilities

Based on our consultations and detailed discussions with mountain bike clubs, recreational managers of purpose-built mountain bike facilities, FCS, and with reference to specific market research carried out as above TRC detail below current and general cycling markets as well as cycling trends for purpose-built mountain bike facilities in Scotland:

PURPOSE-BUILT MOUNTAIN BIKE MARKET	
Market Segment	Market Trends
Groups of between four and 10 adults.	The majority of demand occurs at the weekend.
Most users are male aged between 20 and 45.	Demand is evident year-round although it does peak in summer months.
Most users are A, B, C ₁ , C ₂ , social class and relatively affluent.	Most users have their own transport ie cars.
Most users are in full employment.	Word of mouth, personal recommendation has been the best marketing tool.
Most users report intermediate or expert skill levels.	Mountain bikers also tend to participate in other sports ie walking, running, skiing, snow boarding.
Most users are currently enthusiasts and aficionados.	There are currently few novice riders.
Most users have visited purpose-built trails to ride signature trails.	The family market is untapped and underdeveloped.
Local centres have developed a growing number of schools, youth users.	It is anticipated that the growth in purpose-built cycle facilities in Scotland, together with emerging new initiatives to attract a greater proportion of novice riders, families and groups and better access to routes re community / urban woodland projects, should boost mountain bike sales and demand for 'off-road' cycling facilities in the future. Short session fun-orientated trail around town.

PURPOSE-BUILT MOUNTAIN BIKE MARKET (Cont'd)	
Market Segment	Market Trends
Glentress has developed a children's Saturday Club attracting schools and youth groups.	In the last 10 years cycle ownership in the UK has doubled to an estimated two million new cycle sales each year. However, worldwide trends show a slowdown in mountain bike sales over the last few years. The industry is waiting for the next big thing which is likely to be town and country trails aimed at the casual leisure user – both younger and older. Easier / flatter trails and more comfortable hybrid bikes.
Large proportion of demand is generated by Central Scotland residents as day visitors. About one-quarter of interviewees in the 7stanes survey were staying overnight away from home for weekend breaks etc.	The geographical location of a site has an influence on the market it attracts and the proportion of overnight visitors.
Some centres can attract a large number of overnight visitors. About 75% of visitors to Coed-y-Brenin in Wales (relatively remote location) were holidaymakers.	

6.5 Potential Demand Qualification for Mountain Bike Day Trips From Centres of Population

6.5.1 Background

In order to capture the growing demand opportunity for 'off-road' cycling at a national level, it is important that Scotland has a good network of regional and local purpose-built mountain bike centres. These centres should complement the two existing national centres at Fort William and Peebles (Tweed Valley). This will help to satisfy the growing demand for this type of facility throughout Scotland at both a regional and a local level.

It is important to recognise, however, that purpose-built mountain bike centres are only a small part of Scotland's cycling product. Even when a network of single track 'off-road' cycling centres have been developed, there will still be demand for 'off-road' cycling on forest roads, wilderness areas, estates, parks, tracks, Sustrans routes, country parks etc. TRC research amongst cycle clubs and enthusiasts has confirmed a wide range and variety of cycle trips undertaken throughout the year by a number of clubs to a number of different areas / facilities. Some cycle clubs are organising as many as two trips a week from March to October often one at a weekend and one midweek evening, with night riding during the winter, as well as winter excursions (see West Highland Wheelers, Glasgow Mountain Bike Club).

Research has also revealed that cycle routes which are located close to a person's residence will be used much more often (many more repeat visits) than those which are located further away. This highlights the importance of the local resident population in generating demand for purpose-built cycle centres ie those centres located close to large centres of population will attract a high volume of users and a high volume of repeats.

In addition, it is important to understand that purpose-built cycle centres, particularly national and regional centres such as Fort William / Laggan / Glentress, will generate high levels of demand from short breaks visitors.

In the development of a national single track 'off-road' cycling network, it is therefore necessary to take account of how centres will be differentiated, attract demand and how the demand catchment areas may overlap.

The strategic positioning criteria (see Section 5) for each of the centres will help to ensure that there is limited market overlap and demand displacement is kept to a minimum.

In order to help understand the potential scale of demand in general terms, TRC have developed a demand model based on Scotland's eight regional centres of population ie:

- Edinburgh;
- Glasgow;
- Perth / Dundee;
- Aberdeen;
- Dumfries;
- Inverness;
- Fort William;
- Oban.

The consultants have drawn one-hour drive time isochrones from each of the eight strategic centres of local resident population (see map overleaf).

In essence, the consultants are of the opinion that a regional, purpose-built, 'off-road' mountain biking centre should satisfy the demand from each of these centres of population. This network of regional centres will be augmented by a series of strategically positioned local centres.

It has been assumed that the national centres ie Fort William and Peebles (Glentress) will also be both the regional and local centres for their one-hour population catchment. The one-hour drive time isochrone from each of the population centres demonstrates very little market overlap, apart from Oban / Fort William and in the Central Belt – Edinburgh / Glasgow / Perth, however, the local population catchments in Central Scotland are so large that more than one regional facility could perhaps be supported if strategically positioned and located together with local centres. This will be subject to further study.

The two-hour drive time isochrone however, demonstrates considerable potential local resident market overlap and, as a result, market displacement would be inevitable. The consultants consider that there would be potentially as much demand attracted in from the two-hour isochrone as would leak out from the one-hour isochrone, to the next regional facility. It would, therefore, be prudent to only calculate the local resident demand potential from the one-hour isochrone when estimating demand levels ie trail usage volumes. However, a national centre / facility such as Glentress or Fort William being a world-class icon, calculating both the demand levels from one and two-hour calculations would be acceptable but we still recommend at this stage that prudence in future visitor calculations should prevail.

6.5.2 Demand Model – Local Centres of Population

The resident population within a one-hour drive time of each of the eight key population centres in Scotland has been quantified. Based on the Sports Marketing Surveys' data, about 5.7% of the UK population participated in mountain biking as a sport. TRC, as stated earlier, have adjusted this to an estimated 6% of the local resident population in Scotland.

Based on TRC's general research, it is estimated that people who actively participate in mountain biking as a sport, on average, take between five and 10 trips a year (the midpoint of this range ie 7.5 trips has been used in the following analysis to estimate potential trip taking).

Based on the above, the following quantification of potential local resident mountain bike trips per key population centres has been prepared.

QUALIFICATION OF POTENTIAL LOCAL RESIDENT MOUNTAIN BIKE TRIPS			
Population Centre	One-Hour Drive Time	One-Hour Population Who Mountain Bike	Potential Number of Local Resident Trips Per Year
Aberdeen	412,035	24,722	185,415
Inverness	164,056	9,843	73,822
Fort William	18,630	1,117	8,377
Oban	21,888	1,313	9,847
Perth	1,592,400	95,544	716,580
Glasgow	3,263,389	195,803	1,468,522
Edinburgh	2,808,592	168,515	1,263,862
Dumfries	260,991	15,659	117,442

Note: There is market overlap and double counting as the same local residents could be quantified in more than one population centre ie if you live in Stirling for example you could be counted in the Perth, Edinburgh and Glasgow one-hour isochrones.

The above analysis demonstrates the potential scale of demand for mountain biking as a sport centred around key population centre. It also demonstrates the potential overall market size for local resident mountain bike trips.

- Fort William and Oban both have a small resident population and thus a small number of mountain bike trips are generated so visitor markets will have to sustain mountain bike centres in the Fort William and Oban areas;
- Glasgow has the largest number of potential trips at close to 1.5 million per year;
- The Glasgow and Edinburgh areas have a combined potential of over 2.6 million mountain bike trips a year so the Central Belt area could support more than one mountain biking centre although there is population double counting;
- Aberdeen, by comparison, has 185,000 potential cycle trips, only 12% of the Glasgow total and 15% of Edinburgh;
- What must be borne in mind is that this is an estimate of total mountain bike trips in any year and not just those taken to purpose-built single track mountain bike centres;
- It is inevitable that the number of trips taken to purpose-built centres will grow as an overall proportion, once a comprehensive network of centres has been developed around Scotland;
- In addition, it is likely that the network of purpose-built centres across Scotland will actually stimulate an increase in local resident day and short break cycle trips;
- Local centres will also stimulate an increase in repeat usage for short duration trips ie less than two / three hours;
- The overall quantification of mountain bike trips should be viewed as an 'acid test' only to ensure the demand build-up for purpose-built centres from each local population centre has not been overstated (see later sections of this report).

6.5.3 Conclusion

In this sub-section consultants have determined the potential demand from each of the key centres of population. It must be remembered that this merely demonstrates the scale of demand for mountain biking as a sport re significant population catchments.

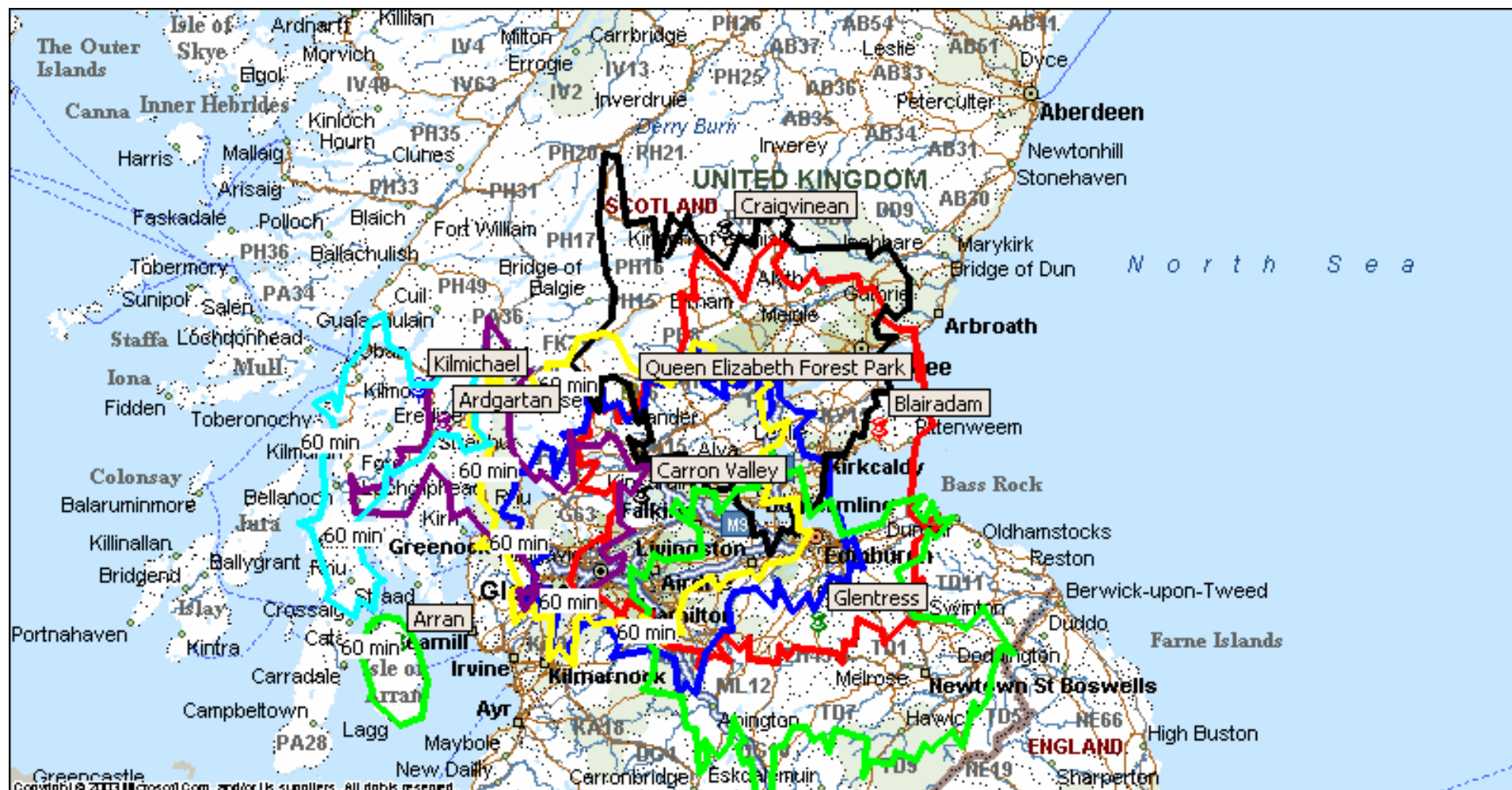
6.6 Quantification of Population – Visitor Demand Catchment

In addition to quantifying the potential demand from the key centres of population, the consultants considered the drive time isochrones and quantified the size of the local resident population from each of the key purpose-built cycle facilities in Scotland, as well as from each of the proposed sites in West and Central Scotland. This analysis, together with the analysis of key population centres, considers day visitor overlap and facility duplication. Isochrones from the key purpose-built single track cycle facilities throughout Scotland have been drawn at one hour intervals along with a visual representation of the overlaps (see overleaf). The local population within one hour has also been quantified. Regional isochrone maps of North, Central and Southern Scotland are also shown in Volume II.

By augmenting these research techniques, TRC are now in a position to quantify the overall catchment size of all possible development sites in West and Central Scotland. Our final analysis includes previous analysis of key population centres, purpose-built cycling centres as well as one-hour isochrones. A graphic presentation of all our analysis is shown in Volume II of this report.

The table overleaf demonstrates the comparison of local resident population catchment sizes – pertinent to the make up and potential of the West and Central Scotland forests.

CENTRAL BELT POPULATION OVERLAPS



COMPARISON OF CATCHMENT SIZE POPULATIONS WITHIN DRIVE TIMES			
Geographic Focus	West and Central Scotland Proposed Tracks	Population Within One Hour	Population Within Two Hours
Loch Lomond and Trossachs	<ul style="list-style-type: none"> • Queen Elizabeth Forest Park • East Loch Lomond • Strathyre 	2,354,002 952,628 674,947	40,300,48 3,612,653 3,941,478
Cowal	<ul style="list-style-type: none"> • Ardgartan • Glenbranter • Dunoon 	966,713 35,004 544,826	3,567,718 2,634,172 3,390,900
Lorne	<ul style="list-style-type: none"> • Crianlarich • Bridge of Orchy • Brecklett • Barcaldine • Fearnoch 	123,705 44,394 26,483 23,623 18,843	3,805,964 3,637,135 1,639,874 429,033 1,243,005
West Argyll	<ul style="list-style-type: none"> • Kilmichael • Knapdale • Carradale 	20,974 19,600 10,571	1,389,972 625,691 23,019
Scottish Lowlands	<ul style="list-style-type: none"> • Carron Valley • Blairadam • Arran • Fauldhouse 	2,827,942 2,751,284 4,986 3,000,263	4,117,558 4,113,444 1,465,591 4,279,134

DEVELOPED SINGLE TRACK CENTRES			
Geographic Focus	West and Central Scotland Proposed Tracks	Population Within One Hour	Population Within Two Hours
Tweed Valley	<ul style="list-style-type: none"> • Glentress / Innerleithen • Newcastleton 	1,229,600 171,738	4,476,257 3,002,123
AE	<ul style="list-style-type: none"> • AE • Mabie • Dalbeattie 	364,204 199,807 137,286	4,510,641 4,484,947 3,495,520
Galloway	<ul style="list-style-type: none"> • Kirroughtree • Glentroll 	84,952 149,716	2,124,198 2,364,011
Tay	<ul style="list-style-type: none"> • Craigvinean 	734,185	4,058,597
Moray	<ul style="list-style-type: none"> • Ben Aigan, Ordiequish, Whiteash 	150,034	596,963
Buchan	<ul style="list-style-type: none"> • Pitfichie 	333,442	736,900
Kincardine	<ul style="list-style-type: none"> • Kirkhill 	424,815	815,170
Inverness, Cairngorm National Park	<ul style="list-style-type: none"> • Laggan Wolftrax • Learnie 	50,030 81,735	906,437 206,921
Lochaber	<ul style="list-style-type: none"> • Witch's Trail 	19,890	239,201

6.7 Conclusion

- With reference to the above table and from the perspective of the day visitor market, clearly the forests located closest to Scotland's centres of population (ie the Central Belt) will have significantly better access to visitor markets than other forest locations found in more rural regions of Scotland. Queen Elizabeth Forest Park, Carron Valley, Blairadam and Fauldhouse all have a visitor population catchment of over two million within a one-hour drive time;
- Specifically the Central Belt area of Scotland will generate a significant level of demand for cycling facilities given the scale of the Glasgow, Edinburgh, Stirling, Perth focus – as the major conurbation area of Scotland. For more remote areas where there is substantially lower visitor catchment population within one hour, there will undoubtedly be an impact on the number of cycling users as a result;
- Statistically speaking Fauldhouse and Carron Valley have the two largest visitor catchments of all forest areas in Scotland but are not tourist destinations and do not have a developed tourism infrastructure. As a result, the propensity to visit an area such as Carron Valley will be less than a comparable tourist destination;
- The table with specific reference to the 7stanes project demonstrates the soundness of the strategic decision to create a world-class purpose-built facility in Southern Scotland. This gives good access to the Northern England markets to attract for short overnight visitor market. It also confirms the reason why Glentress should be the leading facility at a national level;
- The table identifies a clear gap in the market for an opportunity to capture local demand from Glasgow in and around Loch Lomond National Park / Carron Valley where at present the demand is untapped;
- The more remote / rural developments will build success and visitor numbers by creating a 'destination factor' which will entice overnight visitors and capitalise on weekend / short break opportunities ie West Argyll and Arran (see Dumfries).

In this section the consultants have illustrated the process of calculating catchment sizes via isochrone maps, day trips from centres of population and displacement / duplication factors. Visitor numbers are, at this stage, used to highlight the opportunity for each individual forest under review and contrast them with existing purpose-built facilities in Scotland. In Section 9 of the report the consultants have developed a visitor model based on the above to help estimate usage levels at the proposed West and Central Scotland sites.

7 CYCLING – A KEY VISITOR DESTINATION

7.1 Introduction

Tourism is recognised as one of Scotland's most important industries, and each year generates some £6 billion to the Scottish economy. Tourism supports jobs and incomes in industries such as food, retail, transport, distribution and financial services and is particularly important as a provider of jobs and incomes in rural areas. In realising these benefits to the country, the Scottish Executive has set the target of increasing the tourism sector's economic receipts by 50% by the year 2015.

FCS have developed numerous single track cycle destinations in recent years under the 7stanes banner and have helped to increase visitor awareness of some of Scotland's most rural areas, promote / expand regional tourism, generate economic additionality to rural areas and via tourism, connect disadvantaged areas to opportunities and jobs. Indeed, on the back of these objectives, many success stories have already emerged: Glentress (part of the 7stanes project) attracts upwards of 150,000 / 200,000 riders annually; Fort William Aonach Mor is now a recognised World Championship Downhill / cross-country venue / destination; and developments in the Black Isle (Inverness-shire) will help to open up new access / tourism potential to this remote rural area.

FCS are helping to develop and grow Scotland's leisure / recreation and outdoor visitor markets. The extent to which forest cycling continues to expand will depend upon the extent to which cycling can grow in parallel with the market and 'other' tourism infrastructure products and services. This will determine the overall success and destination positioning of forest cycling in the future and not just the size, scale and quality of product provisions. If cycling is able to support a 'competent' destination portfolio (see VisitScotland strategy) including wider serviced provision, then FCS will be able to offer the cycling consumer the complete forest cycling package while maximising economic benefit to the region's other tourism facilities.

The forest cycling experience should be seen as a 'cluster' of interdependent services and products, including accommodation, food and drink, transport, retail (including specialist cycling infrastructure) etc, which directly or indirectly adds to the quality of the cycling as well as the overall visitor experience.

In essence, cycling is tourism, and the tourism product is the ‘destination’; a collection of visitor experiences that is enjoyed by a cyclist from when he / she departs until his / her return from their cycling venture. A collective and interlinking holistic product provision is integral to a successful cycling destination. The level of success achieved will be in proportion to the quality of experience offered to the different types of consumers.

7.2 Cycling Destination Fit

If FCS cycling is to be successful then it must be seen to align its product offering with what the markets – both tourist / overnight and day visitors – want. Cycling destinations need to give a clear tourism focus. There needs to be a critical mass of facilities: cycling, other activities, entertainment, accommodation, refreshment, if overnight visitors are to be attracted (see Cycle Wales and Snowdonia National Park).

The tourism markets are changing internationally and no less so for Scotland. In Scotland, there is a move to short holidays and weekend breaks, particularly those with a metropolitan focus showing strong growth. However, there is also been a particularly strong growth in the activity-driven market and this is of particular importance to the mountain bike cycling product, exemplified by VisitScotland’s / Active Scotland’s resourcing priorities. A market-driven destination approach, in line with the Scottish Enterprise Framework Strategy, indicates that tourism thrives where a destination is termed competent. For cycling to become a key outdoor activity focus, it must possess the following elements:

Competencies	Description
Attractions	Product quality / appeal and market fit.
Infrastructure and Support	Facilitate access and promote quality.
Service	Meet visitor needs.
Brand	Value / coherence and focus.

FCS cycling fits well with VisitScotland’s / Active Scotland’s promotional and marketing campaign. Cycling can capitalise on consumer growth, as well as the unique / established world-class product offering that is already in place. This will see cycling increase visitor demand, stimulate economic activity and help drive VisitScotland’s national activity campaign.

If FCS recreation product provision including cycling not only matches national / sectoral initiatives but also ever-changing market dynamics, then it will have a realistic opportunity to grow into one of Scotland's key outdoor activity assets. If it can develop in tandem; product quality, market synergy and competent destination appeal via wider serviced provisions, then the opportunity for cycling to become major sporting / recreation 'champion' for Scotland will be realised. It is certainly the belief that if a wider holistic framework can be built 'around' the cycling product, then the potential for success will be greatly increased.

7.3 Key Activity-Based Cycling Destinations

Within each of the four Forest Districts re West and Central Scotland, TRC have identified a key tourism destination loci with a wide range of destination tourism infrastructure components. The relevant tourism destinations are highlighted, together with competency factors below:

- 1) Loch Lomond / The Trossachs (Cowal and Trossachs Forest District);
- 2) Oban / Glencoe (Lorne Forest District linked to Lochaber Outdoor Capital);
- 3) Crinan Canal (West Argyll Forest District);
- 4) Arran (Scottish Lowlands Forest District).

A brief thumbnail of 'destination' factors is now as follows:

Loch Lomond / The Trossachs (Cowal and Trossachs Forest District)

Loch Lomond and Trossachs presents a good short break location, set amidst one of Scotland's most idyllic and unspoiled areas with the largest expanse of freshwater in Britain. It embraces the deep waters of Loch Lomond, the wild glens of Trossachs, and high mountains of Breadalbane. Loch Lomond offers a unique / distinctive visitor experience. It offers rural getaway, spa / health and golf resort activity-based specialist breaks, yet it is close to the infrastructure of the Central Belt of Scotland. It is a very popular overnight and day visitor destination. Loch Lomond and the Trossachs have an abundance of other independent service and a wide range of recreation facilities required to build a destination cycling venue.

The focus of partnership in the area is extremely good, both at a Community Futures level and amongst the national agencies. Loch Lomond and the Trossachs National Park is boosting the number of visitors to the area, particularly those from overseas. The agency's remit for promoting enjoyment of the countryside, together with economic benefit, bodes well for well-managed visitor recreation to be developed further.

Oban / Glencoe (Lorne Forest District Linked to Lochaber Outdoor Capital)

High in the Southern Highlands, rich in history, blessed with stunning scenery and serviced by world-class accommodation and visitor activities is the 'wild' area of Glencoe. Together with Loch Lomond and Loch Ness, this is one of Scotland's must-see visitor destinations. It offers hospitality to all types of traveller from families to singles. Situated within a 1½-hours drive of Glasgow (a significant centre of population) and includes fantastic walking facilities, ski slope access and chairlift facilities. It offers an ideal environment for outdoor enthusiasts re walking, cycling, and climbing destination appeal.

Crinan Canal (West Argyll Forest District)

The Canal opened in 1801 and links Loch Fyne at Ardrishaig, South of Lochgilphead with Jura. Pleasure yachts and cruisers sailing on the Canal, together with walkers, cyclists and family tourists are the main occupiers of the Canal. The wider Crinan area offers some good accommodation stock including one of Scotland's finest hotels The Crinan Hotel. Crinan is an ideal leisure / recreational destination base and is an attractive overnight visitor destination augmenting a cycling and sailing focus, with high quality service facilities re food / drink and accommodation etc.

Arran (Scottish Lowlands Forest District)

Often referred to as 'Scotland in Miniature' the Isle of Arran captures many aspects of the beauty of Scotland as a whole. It includes outstanding wildlife, palm trees growing in the warm microclimate provided by proximity to the Gulf Stream, Bronze Age Stone Circles, various museums and Brodick. Arran is truly an idyllic picturesque part of Scotland. It is a well-focused visitor destination with popular outdoor leisure pursuits. Arran is an ideal overnight visitor destination and is already renowned as a 'road' cycling mecca. Linking Arran the brand with a feasible and practical cycling product would help ignite a new breed of Arran 'off-road' cycling products.

8 PRODUCT EVOLUTION, INDICATIVE TRAIL DEVELOPMENT COSTS, SUSTAINABLE TRAIL SYSTEMS AND OTHER ISSUES

8.1 Background – Trail Systems and Other Issues

In this study we have not suggested prescriptive route lines, but we have suggested trail networks and stack loop systems at a strategic level, benchmarked against the existing trail provision in Scotland, England and Wales. Facilities such as skill loops, fun parks, trials areas and freeride, and other interpretation trails have also been recommended as part of the evolving forest cycle product as appropriate.

In order for a purpose-built cycle development to attract a significant number of visitors, a critical mass of various development routes of different type and skill level are required to attract a wide market base and encourage repeat visits. In general tourists who cycle whilst on holiday tend to cycle short distances on relatively flat routes; however there is a growing trend for longer wilderness, single track and high adrenaline type extreme sport experiences.

In the development of cycle products in the forest we have taken into account the trends and matched various products to market opportunities. We have also identified market and product gaps.

Apart from purpose-built single track mountain bike developments focused in 'centres' we have also recommended other strategic cycling-based products such as: Epic loops and links to the national long-distance cycle network (see forest cycling wider opportunities – Epic brands and links – see Glentool, 7stanes).

8.2 Trail Type Overview

To help clarify the trail grading scheme currently in operation, the consultants have prepared a brief synopsis of the different trail 'types' by colour and grade (see table overleaf).

TRAIL TYPES SYNOPSIS	
Trail Colour	Description
Cross-Country Green	Easy, relatively flat and wide trail. Climbs and descents shallow. Smoother surface often 2m to 3m wide. Few obstacles. Suitable for beginner / novice cyclists and families and children. Often makes use of forest roads with other single track connections, public roads etc – could be ridden with 'hybrid' mountain bike type, child's bike or adult bike with 'tag-a-long'.
Cross-Country Blue	Moderate grading. May include short, steep sections. Surface may include small obstacles, roots, steps etc, mostly 1m wide. Suitable for intermediate cyclists / mountain bikers / reasonably fit families. Front suspension mountain bike recommended could be ridden on rigid or child's mountain bike.
Cross-Country Red	Difficult grading with steeper and tougher sections. Includes rougher, arduous sections to satisfy the need for technical challenges. Surface type often challenging and width below 1m with a range of surfaces including rough narrow tracks. Suitable for good mountain bikers / with good experience – front suspension bike with disk brakes recommended.
Cross-Country Black	Severe grading with steep gradient and drop-offs. Trails will be very technical with many rocky contours and grade reversals. Surface is mainly rough / rocky narrow tracks. Trail widths very narrow between 10cm and 60cm. Targets expert mountain bikers. Majority of trails will be single track – full suspension bike with disk brakes recommended.
Downhill (Red / Black)	Severe grading. A short, technical descent usually between 2km and 5km in length. Steep with drop-offs and 'mandatory air'. Targets advanced riders with specialist downhill mountain bike experience – 'large travel' full suspension bike with 5 to 6 inches of suspension recommended.

Note: Type of bike is consultant's own recommendation based on personal experience.

8.3 Analysis of Trail Length by Grade

In the table overleaf and in Appendix II, we have provided an analysis of purpose-built mountain bike trails in Scotland and Wales by length and grade. In Wales the grading system is different to Scotland and is not even uniform across the Country.

Based on the benchmark analysis (see Appendix II), the following summary of indicative trail lengths have been prepared by grade. This has helped the consultants in recommending trails for key market sectors by grade and length in Section 9.

TRAIL LENGTHS BY GRADE IN SCOTLAND AND WALES			
Trail Colour	Minimum (km)	Maximum (km)	Average Range (km)
Green	6	11	5-10
Blue	8	16	10-15
Red	6	23	15-20
Black	17	46	20-35
Black / Double Diamond	2	7.6	2-8

What must be borne in mind is that the above trail lengths are total trail lengths and not just the built single track length. The length of built single track varies due to the terrain and the network of existing forest roads. A purpose-built mountain bike route tends to make use of forest road ascents and develop single track for descents particularly in the first development phase. This results in a more cost-effective cycle route development approach.

In subsequent development phases, proportions or indeed all of the forest road ascents may be removed. A greater proportion of single track gives greater satisfaction to the adrenaline-seeking enthusiast / mountain bike devotee. Forest roads can sometimes be more than 50% of a purpose-built mountain bike route, but 30%-40% appears to be a more satisfactory level, where high technical adrenaline routes are proposed. In routes which are promoting views and special interest, interpretation etc, a greater proportion of forest roads can / are utilised in the route. Long-distance routes (see Glentool) may make no use of purpose-built single tracks but link together public roads, Sustrans cycle routes, forest roads, Land Rover tracks, etc.

8.4 Indicative Trail Costs

As part of this study we have prepared indicative trail development costs. These are based on benchmark trail development costs from the 7stanes and other constructed mountain bike trails throughout Scotland. See table overleaf and 7stanes proposed costs in Appendix III.

SUMMARY OF TRAIL DEVELOPMENT CONSTRUCTION COSTS				
Forest and Course Type	Constructed Length km	Cost of Construction £	Cost Per Metre* £	Approx. Cost Per Metre (2005 Prices) £
Kirkhill Forest (Proposed Red Route – 2003 Prices)	9.80	£93,977	£9.59	£10.00
Pitfichie Forest (Proposed Red Route – 2003 Prices)	11.60	£144,655	£15.64	£16.50
Pitfichie Forest (Upgrade to Downhill – 2003 Prices)	3.08	£35,479	£11.52	£12.00
Laggan Wolfrax (Fun Park Blue – 2003 / 04 Prices)	1.42	£19,173	£13.50	£14.00
Laggan Wolfrax (Red Route)	3.52	£40,902	£11.62	£12.00
Laggan Wolfrax (Double Black Route)	3.83	£56,712	£14.81	£15.25
Cycle Therapy Full Bench Cut (2004 / 05 Prices)	-	-	£8.00- £10.00	£8.00- £10.00
Cycle Therapy North Shore	-	-	£32.00- £40.00	£32.00- £40.00
Cycle Therapy Downhill	-	-	£20.00	£20.00
Cycle Therapy Fun Park	-	-	£20.00	£20.00
Ben Aigan Summit Trail (2004 Prices)	6.68	£32,522	£4.90	£5.00
Achray Forest Proposed Blue (2001 Prices)	9.80	£29,400	£3.00	£3.31
Achray Forest Proposed Red (2001 Prices)	6.15	£18,450	£3.00	£3.31
Kilmichael Proposed Blue Loop (2005 Prices)	8.90	£170,500	£19.16	£19.16
Kilmichael Proposed Red Iconic Loop (2005 Prices)	13.10	£266,700	£20.36	£20.36
Kilmichael Proposed Link Trails (2005 Prices)	3.80	£73,400	£19.32	£19.32
Learnie Red Route	2.58	£38,131	£14.78	£14.78
Learnie Fun Park	1.20	£20,823	£17.35	£17.35
Learnie Blue Car Park Link	0.43	£5,422	£12.61	£12.61
Learnie Blue Route including Path Link	2.91	£38,714	£13.30	£13.30
Learnie Black excluding North Shore	3.89	£58,096	£14.93	£14.93
Learnie North Shore	0.25	£9,108	£36.43	£36.43

(Source: Forestry Commission Scotland)

Note: * All costs have been presented at actual year prices and then inflated to 2005 prices for direct comparative purposes.

It is extremely difficult to assess the cost of a sustainable trails development in the strategy without a clear technical assessment and survey of the trail line, terrain, side slope, soil type, ground conditions, markets that will use the trail, number of users etc. However, we have attempted to estimate potential trail development costs based on benchmark analysis.

Based on the comparators outlined above, the following trail costs have been assumed:

RANGE OF SINGLE TRACK TRAIL DEVELOPMENT COSTS	
Trail Grade	Trail Costs Per Metre of Single Track Constructed
Green	£10-£15
Blue	£10-£15
Red	£10-£20
Black	£15-£20
North Shore	£30 / £40
Local Community as Dug Trail	£5-£7
Multi-User Trails	£10-£20
All Ability User Trails	£10-£20
Multi-User Skill Trails	£20-£60
Freeride / Fun Parks	£10,000-£20,000 (per facility)
Skills Area	£10,000-£20,000 (per facility)

All the indicative trail capital costs outlined above exclude design fees and trail development project management costs. Together they usually add about 10%-12% to the trail development cost if delivered by one of the three / four recognised trail designers in the UK. However FCS has developed a wealth of trail building / project management experience (see Andy Hopkins 7stanes). Ongoing trail design, project management and trail construction policies at a regional level should dovetail with the evolving National Forest Cycling Strategy.

8.5 Forest Cycling – Wider Product Opportunities / Issues

8.5.1 Introduction

There is a real opportunity for the National Forest Estate to be at the forefront of outdoor recreation in Scotland given its large landholding – forest road, footpath, cycleway and bridle path network. The consultants believe that the new land reform act offers unique opportunities to develop a ‘world-class’ network of paths and trails. If developed sensitively, this network can be used by landowners / managers to positively manage visitor access over their land. The consultants believe the opportunity is to actively sign and promote key strategic forest routes and local networks.

There is a school of thought however, which states that cycling on forest roads, particularly those used for descending, should not be encouraged as the surface is often poor, loose, not fit for purpose and there are safety issues of speed, meeting other road users etc. Due to this, forest road descents cannot and should not be used for cycling: there is too big a liability for FCS.

However this attitude does not fit with the current land reform act re visitor access (responsible users). In any event a landowner probably has some duty of care over the route network whether it is signed or not. Lack of signage could not be used as a reason for abdicating all responsibilities. There appears to be increasing merit to actively manage visitor access of strategic forest roads and other routes (see 7stanes, Glentool).

In any event it could therefore be argued that road cycling routes should not be signed down steep public roads with blind corners or loose surfaces as there is too great a liability and risk, but this is surely not the case.

It is the consultants' opinion that an objective and pragmatic view must be taken. Signed forest roads, single track Sustrans route etc can all be used for cycling if the dangers and risks are clearly communicated to the users and the landowner, trail recommending party has taken reasonable steps to minimise and communicate the risks to the users. TRC believe that signage / interpretation of trails must be clear, accurate and consistent on each forest trail. If this can be achieved, then there is no reason to stop / prevent certain cycle routes from being promoted.

Whilst many of these forest routes already exist and are signed, it is the clear promotion and communication of these to the market is where the issues lie. This is less of an issue with perhaps walking routes where visitors can walk across most ground, however, this is not the case with cycling or horse riding.

A cyclist can look at maps (and has always been able to) for the myriad of trails, paths, Land Rover tracks, rights of way across Scotland and now has access to all of these, but which trails can one cycle? How can the trails be linked together? What are the best routes? Which are the least sensitive areas, etc?

In recent years the traditional forest cycling product of signed forest roads has been in decline, in part due to a shift in market focus, but also due to a lack of trail upkeep, sign replacement, lack of linkages, etc. However, there is still a market for cycling on a wider network of forest roads – Sustrans routes, local cycle networks, paths, trails etc and this should not be overlooked.

The National Forest Estate has a strategic role to play together with partners in providing these routes (long and short). They attract a wider market and are for safe cycling, particularly amongst families, women, older people, adventurers, fitness market etc and provide a good transition from road cycling to purpose-built single track. This is an important recreational resource, transport network, key linkage, etc. Each forest has a strategic role to play in this. The consultants however believe that the opportunity is even greater, if these and other link routes are properly marketed, packaged and branded. One just has to look at the monthly mountain bike magazines to see recommended routes and pull-out route cards. The web is also full of route recommendations as are cycle books, etc. Our research in local bike shops, particularly in Glasgow and Edinburgh, also revealed a growing need for recommended routes.

On the back of the success and quality of the single track mountain bike developments across Scotland (see 7stanes), FCS has a reputation for quality mountain bike developments. As the mountain bike forest cycling brand continues to develop, this will only be enhanced.

The FCS mountain bike cycling brand has values of:

- Quality Product;
- Safety;
- Fun;
- Good Experience;
- Good Signage;
- Visitor Comfort.

There is opportunity for these values also to be applied to other 'off-road' routes and a wide range of other product types aimed at families, older cyclists, groups, cross-country mountain bikers, etc.

The Forestry Commission Cycling brand should become synonymous with forest cycling in its widest sense as the Cycle Touring Club brand is to cycle touring or Sustrans to long-distance routes.

8.5.2 Cross-Country Epic Brand

There is an opportunity to develop a network of recommended signed loops but ungraded (see Glentool, 7stanes), 'out and back' trails under a new brand utilising forest roads, strategic single tracks, National Cycle Networks etc. At this stage the consultants have used the title Cross-Country Epics for this brand. These signed routes will provide the seal of approval for the visitor by FCS (who are seen as the leading authority in mountain bike development in Scotland). The brand values which have been established in the single track trail development would be applied to the forest road routes. In some instances this may just be a repackaging and repositioning of existing forest routes, but there are also opportunities with strategic links and route partnerships to devise a more imaginative product utilising Sustrans routes, local path networks etc.

Issues of ongoing maintenance, liability, signage etc on long routes etc would have to be addressed at partnership level. All Epic routes would have wonderful views, points of interest en route, interesting terrain and landscape, natural or historic built heritage. The routes themselves would not have the technical difficulty of single track routes as they would be ungraded trails (see National Strategy grading guidance). Some routes however would be long-distance so would have a physical difficulty. The consultants suggest that the Cross-Country Epic brand could appeal to a wider range of markets if the brand was subdivided:

- Epic Mini – flatter, shorter routes aimed at families, children and older cyclists;
- Epic Classic – routes with wonderful views, attractive to half-day, cross-country excursionists, older families;
- Epic Mega – long physically demanding routes over varied terrain aimed at the adventurous, physically fit, cross-country cyclist – some of these routes could be designed to incorporate an overnight stop passing through villages (Bed and Breakfast, Hotels, Campsites, and Hostels etc).

The consultants also believe that Epics can play a wider role if directly linked to regional and national purpose-built mountain bike centres. The Epic brand will widen the market appeal of purpose-built centres. The purpose-built centre will provide safe car parking and in some instances central facilities: refreshments, toilet and changing for the Epic rider.

8.5.3 Fun Parks, Skills Loops and Freeriding

Freeriding

In recent years there has been a growing trend 'stateside' for freeriding: a style of riding which encompasses technical (a section of trail which is difficult to ride due to rocks, tree roots or manmade obstacles) riding and downhill (see Volume II). Freeriding is an 'adrenaline pumped' experience aimed at the younger 14 to 25 male user.

Freeriding is about 'getting air', jumps, skills and tricks. Freeride bikes are of the full suspension variety and generally have about 100mm to 150mm of suspension travel. They are stronger, heavier bikes which can stand the strain of jumping.

Downhill and more extreme cross-country trails (see 'Ae Line – Scottish Power Renewables Trail, Forest of Ae) have always had elements which appeal to freeriders. However freeriders did not want to cycle the whole trails, only 'session' parts of it. As a result, short dedicated freeride trails of 1km to 2km or less were developed. These trails included features such as berms (high banked turns), drop-offs, gap jumps, tabletop jumps (jumps with flat top section), doubles (jumps with two peaks), North Shore (sections of boardwalk), seesaws, large boulders and other manmade or natural challenges.

Fun Parks

As a result of the growing trends and need to meet the growing freeride market in Scotland (see Volume II) fun parks have been introduced at three centres: Kirkhill, Laggan Wolfrax and Learnie. These are short sections of downhill-style trails incorporating manmade features – made with large diggers and earth moving equipment and include large berms, jumps, tabletops etc. The fun park has been made safer than the American freeride parks as they have been designed so that the less skilled rider could roll over and round each feature ie there are no forced drops or jumps, 'no mandatory air', unless you are going at high speed. The trail is at the discretion of the rider.

The consultants recommend however that, these fun parks should not be an integral part of a cross-country trail; they should be viewed as a separate product / entertainment feature. They should be located close to the trail start point / central facility to promote 'session riding'. A future product evolution may be to design fun parks for different rider levels / routes obstacles etc.

In Glen Urquhart, a freeride park in the true American style has been developed by FCS together with the local community enthusiasts (see Mammoth Mountain – California, Breckenridge Freeride Park – Colorado). Other styles of freeride park could evolve across Scotland if issues of safety, risk and liability can be addressed.

Skills Loops / Areas

As part of the comprehensive Whistler mountain bike trail system in British Columbia, Canada, there are skills areas which have been graded to match and improve the skills level of the rider. The 7stanes mountain bike centres have developed graded skills loops areas (see Glentress / Kirroughtree). The Glentress skills loop is aimed at the novice rider where interpretation panels show how to improve riding technique. At Kirroughtree in late August 2005 a limited blue / red / black skills area was opened to help improve skills by giving opportunities to ride similar obstacles, close to the centre, that would be experienced on the trails. Skills areas are also proposed at Ae, Mabie and Dalbeattie as part of the 7stanes Phase II development.

In Hamsterley Forest, Teesdale, an impressive skills loop is currently under construction, where various features of different grades can be cycled off a core trail. The cost of this skills area is allegedly £200,000 due to poor ground conditions re drainage, the need for bridges and large rock imports from a nearby quarry.

8.6 Towards Sustainable Trail Systems

8.6.1 Introduction

As part of the research for this project the consultants have held detailed discussions with trail design consultants in order to gain a better technical understanding of trail design issues. In addition reference has been made to the International Mountain Bike Association (IMBA) Trail Solution Handbook and National Surface Trails By Design, Troy Scott Parker. The development of purpose-built cycle trails in Scotland is a relatively new 'art'. At present there are four key trail designers and each recognises that a uniform trail solution cannot be applied.

A trail designer must take account of the type of user (walking, cycling, horse riding), the ability of the user, the volume of use, the steepness of terrain, soil and rocks, ground conditions, weather / local climate etc. In Scotland, given the wet climate, excellent drainage is a key issue to prevent erosion by water, the 'arch enemy' of trail sustainability. As a significant number of the forest areas of Scotland have very peaty soil which retain water this exacerbates the problem. All the trail designers recognise that mistakes have been made and that certain sections of trail cost more than planned, are not sustainable or had to be redesigned. The cost to redesign and alter a trail after construction is costly and time consuming and often has a negative impact on the user market.

The consultants are advocating a more comprehensive system of planning and controls in the development of trails. We also consider that the planning approach should consider the macro as well as the micro issues. The consultants consider that the trail designers at present have concentrated perhaps too much on the micro issues which is quite correct given their detailed product design approach. FCS and their project partners however need to consider the trail planning process and the macro issues in more detail well before any micro issues are considered. They need to better manage the trail designers and construction teams, to ensure a more sustainable trail network evolves which meets market requirements and maximises / delivers anticipated benefits.

Examples of Good Trail Design/Construction



Photographs Courtesy of Dafydd Davis

Tourism Resources Company

8.6.2 Trail Planning Process

1. It is recommended that the planning of a trail system in the future is more holistic and wider linkages and other users / multi-users are considered.
2. Ideally a trail system should be planned in its entirety at a macro level rather than in ad hoc parts, even if the development is to be phased.
3. An assessment should be made at an early stage as to whether the terrain is suitable for the product requirements to meet market needs etc.
4. Prescriptive plans down to micro level should be drawn for each section in detail describing technical trail design features, surfaces, gradients etc.
5. Trail corridors should be identified and surveyed in detail for soil condition, ground slope, mineral content etc.
6. A detailed statement of the ongoing maintenance liability likely for each trail section should be prepared.
7. Continual checks and balances need to be put in place by the designer in the construction process to ensure trails are built to the correct specification.
8. A statement on how the trail network should be managed in the future giving due cognisance to volumes of use, linkages, visitor pressures, maintenance and product / market evolution.

8.6.3 Macro Questions to Ask

1. Who is the market that will use the trail and what do they want?
2. How many users will there be and how often will they use the trail?
3. Will the trail be multi-use / shared or single use?
4. Where will the likely visitor conflicts appear?
5. How will visitors access the trails?
6. What will be the links to the wider visitor destination and other networks?
7. What is the future timeframe for development? Is it phased?
8. Should users be involved in the planning of the trails? What will be the consultation process?
9. How will trails be capital funded, revenue funded and sustained?
10. Are the terrain / ground conditions suitable to meet the market needs?
11. How will the trail be built and by whom?
12. Should the trail project proceed to micro phase?

8.6.4 Micro Issues for Consideration

The purpose of this section is to give the reader a better understanding of micro trail building issues.

Micro issues for consideration in trail design are summarised as follows:

- Choose correct trail corridor for market requirements;
- Minimise trail corridor width, reduce visual impact and maintenance and increase sustainability;
- Audit sustainability of existing trails – refine if necessary;
- Detailed assessment / survey of ground conditions, mineral soils, drainage, side slope etc;
- Ensure trail width and trail surface is suitable for market requirements;
- Increase the use of flowing natural shaped trails to improve visitor enjoyment – particularly novice, intermediate markets;
- Avoid fall line trails, create contour trails with techniques such as grade reversals, bench cut with blended back slope;
- The trails must not be greater than 50% of the gradient or it is considered fall line and is not sustainable;
- Utilise trail anchors, rocks, stumps, trees to prevent tread creep and erosion;
- Ensure sight lines on multi-use trails are good, use flowing curves;
- Utilise control points – trail narrowing with rocks, bridges, trees, coles, corrals, twisty sections to slow down and manage cyclists particularly useful or multi-use sections, before crossing roads etc;
- Introduce rock armouring, boardwalks, bridges in wet areas, it adds to the cycle experience, but it must be appropriate to the skill level of the user;
- Only if appropriate to the terrain and the user market (advanced and expert), ‘thrill-style features’ can be created such as berms and drop-offs etc. However, these must be very carefully planned to ensure long-term trail sustainability. The deterioration of these trails could be rapid with high and constant, particularly ‘session-style’ use. These features, if inappropriately or poorly designed, could create costly future maintenance / management issues. It must be understood that these features may need more active management / maintenance on an ongoing basis than a naturally designed trail;
- Ensure the average trail gradient is below 10% as this will improve sustainability;

- Good trail design is key. Pay particular attention to the need for good drainage with introduction of culverts, grade reversals, tread out slope, clearance of brash from down slope etc.

8.6.5 Conclusion

The existing professional cycle trail designers are extremely good at considering the micro issues outlined above and there are many examples of cycle trail design emerging throughout Scotland. The consultants believe that the natural design approach linked to a macro and micro planning process is the key to providing a sustainable trail network for a multitude of users at different skills level throughout Scotland.

A high level of ‘thrill-style’ features can be added if appropriate as long as the implications of longer-term sustainability management and maintenance are properly addressed. The micro planning process should be able to determine ongoing trail liabilities section by section.

8.7 Ongoing Maintenance and Trail Management

No trail system, even with good design and planning, is 100% sustainable; they all need regular management and maintenance. Discussions with Scotland’s trail designers and the 7stanes management team have revealed trail maintenance costs per annum are on average between £0.50 and £0.60 per metre for purpose-built single track. This usually equates to about £0.25 to £0.30 over the whole length of the trail – assuming no maintenance costs on forest roads or other link sections. Highly designed ‘thrill sections’ may cost more to maintain than this average.

In a Centre such as Kirroughtree which has 47km of natural-style trails (total length) the maintenance cost each year will be about £12,000 to £14,000.

The consultants believe it is extremely important at the trail planning / design stage to identify the sections of trail which may require heavier maintenance and those areas which would benefit from regular inspection for safety / risks etc.

It is also important that a regular Trail Assessment is carried out by appropriate staff. In a large purpose-built mountain bike centre, the consultants recommend that a dedicated cycle ranger is appointed who as part of the job description would have a role to assess trails on a regular basis. This will help FCS manage risk and meet ongoing liabilities.

In a smaller centre this may be the wider role of forest ranger staff, or it may be practical to employ a dedicated cycle ranger over a number of smaller cycle centres.

It is suggested that a formal maintenance system is put in place with trail assessments and repair sheets. These should outline:

- Location of problem;
- Type of problem;
- Priority and timescale;
- Need to inform users – close / divert trails;
- Type of repair, equipment requirement and cost estimate.

It is extremely important that maintenance issues are clearly communicated to the public, where they have a direct impact on the cycling experience. In severe cases, trails may have to be closed, diversions instigated or new sections of trail constructed. It is the consultants' view that the same communications system should apply to timber harvesting operations, etc.

Trail management would also involve a considerable amount of customer care / communication particularly at the larger centres where a dedicated resource can be employed. The cycle ranger would provide a customer interface for FCS and provide liaison with schools, youth groups, activity providers, etc. There is also the opportunity for a ranger to provide guided rides, organise skills sessions and local events etc.

Poor Trail Maintenance

Berm Worn Out, Wooden Supports Visible, Material Transported To Bottom



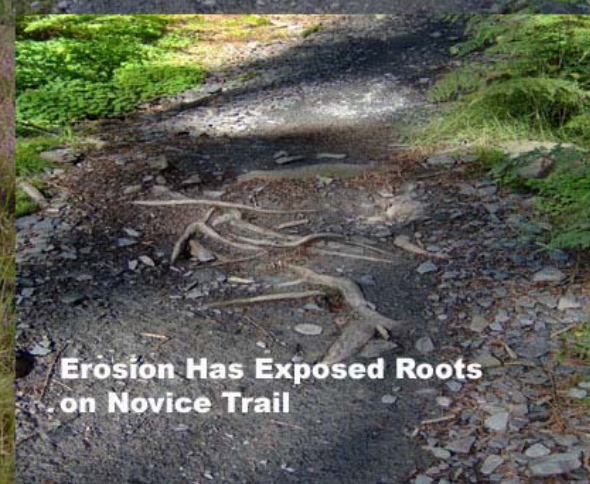
Culvert Drainage Pipe Exposed And Crushed Reducing Drainage Capabilities



Severe Water Erosion on Fall Line Trail, Water Flowing Down Trail Tread



Material not Removed After Trail Repair Causes Safety Hazard and Reduces Trail Drainage



Erosion Has Exposed Roots on Novice Trail

Prepared in Consultation with Daffyd Davis

Tourism Resources Company

9 EXAMINATION OF PROPOSED FOREST DEVELOPMENT IN WEST AND CENTRAL SCOTLAND – REPORT OVERVIEW

For the purposes of clarity and understanding, we present our research findings of our detailed forest evaluations in four separate (potentially standalone) sections, Parts A to D. It has been assumed that the reader will have read Sections 1 to 8 giving background information and context.

Within each standalone Part, consultants have prepared:

1. an analysis of each forest area and its suitability for continued cycle development;
2. its strategic positioning and target markets;
3. a summary of development recommendations and indicative trail development costs – by forest area; and finally
4. an estimate of trail usage – by forest area.

As all readers are aware, the West and Central Scotland Forest Cycling report is being prepared in conjunction with the formulation of a National Cycling Strategy for FCS. TRC research findings, conclusions and recommendations in this report form the basis from which prioritisation of product opportunities at a national FCS level has been produced. The prioritisation of all FCS sites on a Scottish-wide basis is presented in the National Cycling Strategy for FCS.

The four Forest Districts and related 'parts' are as follows:

- Part A (A1-A4) Cowal and Trossachs Forest District;
- Part B (B1-B4) Lorne Forest District;
- Part C (C1-C4) West Argyll Forest District;
- Part D (D1-D4) Scottish Lowlands Forest District.

PART A – COWAL AND TROSSACHS FOREST DISTRICT

A1 ANALYSIS OF PROPOSED FOREST CYCLING IN COWAL AND TROSSACHS FORESTS

In this section we have prepared an analysis of the Cowal and Trossachs Forest District and assessed individual forests on the basis of their potential for future forest cycling development.

In some of the cases under study, development of single track off-road forest cycling has already commenced while in other areas the cycling infrastructure is very limited. For the purposes of this study, each potential loci has been assessed with a market-led rationale and this fits with a key guiding principle of the mountain bike and cycle strategy prepared for the National Forest Estate. This has been prepared irrespective of any cycle developments to date. As part of this analysis, there was consultation amongst key stakeholders and representatives of each forest. TRC consultants prepared a detailed analysis of an individual forest re location, access, sensitivities and strengths and weaknesses etc. We have also identified the strategic positioning, market opportunities and resulting potential wider benefits for each site.

A breakdown of our findings is highlighted overleaf in tabular bullet point format.

COWAL AND TROSSACHS FOREST DISTRICT							
Reference Area	Forest Characteristics	Forest Cycling Development History	Strengths	Weaknesses	Existing Forest Recreation and Wider Tourism Infrastructure Provisions	Wider Benefits	Market Opportunities
Trossachs Focus							
Glen Finglas / Ben A'an	<ul style="list-style-type: none"> Glen Finglas Estate, encompasses 10,000 acres, is owned by the Woodlands Trust – the UK's leading conservation and woodland charity; Their aim is to manage, protect, but also make the woodlands accessible to all; From the summit of Ben A'an there are good views down Loch Katrine to the Cobbler and Ben Lomond, as well as stunning views back to Loch Achray and Loch Venachar. 	<ul style="list-style-type: none"> There are numerous routes and links developed by the Woodlands Trust – all multi-user. They include The Mell, a strenuous 15 miles walking and cycling trail around Glen Finglas; The Woodlands Trust have aspirations to create a network / of multi-user routes re links to Callander via Milton and Loch Venachar. 	<ul style="list-style-type: none"> Cycle and walking routes are actively encouraged in Glen Finglas by the Woodlands Trust; Café, retail infrastructure and toilets are available in Brig O'Turk; Footpath links through Glen Finglas to Balquidder are possible. 	<ul style="list-style-type: none"> Limited car parking at Brig O'Turk; Steep Land Rover track route in Glen Finglas, need to walk up in places; High level route up to 600m on rather exposed moorland; At present, not able to circumnavigate Glen Finglas Reservoir. 	<ul style="list-style-type: none"> Numerous well-known forest and cycling walks in the area. Most notably the Lendrick Hill, the Little Drum Wood and the Brig O'Turk Loop; The Woodlands Trust propose a low level route on the East Shore of the Glen Finglas Reservoir. 	<ul style="list-style-type: none"> Restore Glen Finglas to its previous glory, by continuing to protect and enhance the area's woodland diversity ie Woodlands Trust objectives; Capitalise on the objectives of the Woodlands Trust, who seek to attract more people to the forest ie via links to Callander; Building a strong community destination focus will help to stimulate local economic activity sustaining local and visitor services; Opportunity to build a community partners project and develop volunteer links for trail maintenance / development etc. 	<ul style="list-style-type: none"> Not a purpose-built single track development; Day visitors / overnight tourists add to supply of mountain bike / off-road routes in Loch Lomond and the Trossachs National Park area; Opportunity to link into long-distance Cross-Country Epics product; Increase average length of stay; Links with Callander largest population settlement in the National Park.
Strathyre	<ul style="list-style-type: none"> Strathyre Forest covers a dramatic 'V shaped' glen chiselled out of the land by the brute force of a glacier during the Ice Age. It has good views and points of interest (ie Leny Falls), dramatic landscape and quality timber in stock; The forest is located directly North of Callander on the A84; Main access is provided at the Strathyre car park and the Pass of Leny car park. 	<ul style="list-style-type: none"> The National Cycle Network Sustrans Route 7 goes through the area on the West Shore of Loch Lubnaig; Currently there is an informal downhill route for mountain bike enthusiasts. The trail was developed as part of the Scottish Downhill Association annual events calendar. The downhill competition in 2005 attracted over 250 participants; Scottish Downhill Association have plans to build second downhill route (autumn 2005); The Ben Ledi Cycle Loop is a 5 miles circular route which follows part of the Strathyre Forest Walk. 	<ul style="list-style-type: none"> The National Cycle Network Sustrans Route 7 traverses forest; Possible community involvement in future development; Event downhill route supported by volunteers; Families and children utilise Sustrans route; Good views and points of interest from forest; The Kings Hotel could offer refreshments; Forest self-catering cottages available at Stank. 	<ul style="list-style-type: none"> The Sustrans route is a through route – single out and back route only; Downhill route not very sustainable (re 'fall line' focus); Lack of car park facilities for Downhill events; Circular routes are limited; Visitor pressure at Falls of Leny; Sustrans route used by high number of walkers; Bochastle car park is underutilised; Juniper forest in Bochastle area limits development opportunities; No uplift possibilities for downhill at Strathyre unless new road built ie at present long forest road route to top of downhill. 	<ul style="list-style-type: none"> There are two walks of note, starting at the Strathyre car park: the Baileful Walk, a 2½ hours, 4 miles trail; and the Beinn an t-Sidhein Hill, a 1 mile hike; At the Leny car park is the Leny viewpoint walk which is a ¼ hour, ½ mile trail to see the waterfalls. 	<ul style="list-style-type: none"> Private business spin-off re downhill training / competitions spends in the local area – people coming from all over UK for Scottish Downhill Association events; Business benefits re food / drink and accommodation; Strathyre offers a niche downhill event product and targets specific market – provides the market with more 'testing facilities' – for those at the more extreme end of the cycling market; Strathyre is creating brand value as a downhill destination – for one-off events. 	<ul style="list-style-type: none"> Continue to satisfy one-off events; Downhill market (see National Strategy re Scottish Downhill Association opportunities); Long-distance touring / Sustrans market; Families and visitors re National Cycle Network Route; Continue through route links with Sustrans; Link cycling to forest holiday product; Part of Epic product route.

COWAL AND TROSSACHS FOREST DISTRICT							
Reference Area	Forest Characteristics	Forest Cycling Development History	Strengths	Weaknesses	Existing Forest Recreation and Wider Tourism Infrastructure Provisions	Wider Benefits	Market Opportunities
Trossachs Focus							
Garadhban	<ul style="list-style-type: none"> Located to the North of Drymen off the A811; Forest joins with the most southerly sections of the Loch Ard Forest and links by an unclassified road to Drymen; The West Highland Way crosses the forest and offers views up to Conic Hill. 	<ul style="list-style-type: none"> This is a small and rather limited forest with no designated cycle routes at present. 	<ul style="list-style-type: none"> Close to village of Drymen; New car park just been completed; Forest already a recreation resource; National Cycle Network Sustrans Route 7 passes through forest. 	<ul style="list-style-type: none"> West Highland Way traverses forest on central forest road, potential conflict with high volumes of walkers; Relatively small forest area; Limited forest road network; Forest well used by horse riders / conflict with high volumes of cyclists; Limited forest diversity; Current harvesting operations have a greater impact on recreational opportunities because it is a small forest. 	<ul style="list-style-type: none"> FCS car park located at the entrance to the forest; Forest is well used as a horse riding destination by the local riding fraternity. 	<ul style="list-style-type: none"> Little wider cycling benefits identified; Continue to be used as an important horse riding facility in the Trossachs / Loch Lomond, supporting local resident needs. 	<ul style="list-style-type: none"> No opportunity for purpose-built single track mountain bike development; Market opportunity to include forest as part of Loch Lomond Epic ride; Capitalise on existing local area re Drymen horse riding etc.
East Shore of Loch Lomond	<ul style="list-style-type: none"> Balmaha (East Loch Lomond) is the Southern gateway to the Scottish Highlands; The main approaches to the forest are via the A811 from Stirling and Balloch to Drymen, or the A81 from Glasgow and Callander; The forest is dominated by views of Ben Lomond and the Highland Boundary Fault; Popular through route with walkers on the West Highland Way; There are major visitor pressures to this forest / East Loch Lomond during peak times. 	<ul style="list-style-type: none"> Currently no mountain bike provisions offered; Focus of the destination is walking and not cycling; Scottish Downhill Association have aspirations to build downhill circuit in future. 	<ul style="list-style-type: none"> Well-known visitor destination; Within psyche of Glasgow local residents; Caravan parks create some demand for activities; Within National Park. 	<ul style="list-style-type: none"> Significant visitor pressure on Ben Lomond footpaths; Road closures at peak summer months / weekends; West Highland Way at Parington Block liable to landslides. The route needs development / diversion; Area not currently cycled, mainly walkers. 	<ul style="list-style-type: none"> Cashel Caravan and Camping Site is situated on the Shores of Loch Lomond and on the route of the West Highland Way; The main walk is the Balmaha Pass heading towards Cashel, Salloch, Rowardennan and Ben Lomond (part of the West Highland Way). 	<ul style="list-style-type: none"> No product opportunities or linkages recommended by consultants. Area should be actively promoted as a walking route only; Visitor pressures re walkers; High volumes of cyclists would be detrimental / dangerous; Therefore assume minimal / no real benefits from cycling. 	<ul style="list-style-type: none"> Area too sensitive in general not suitable for major mountain bike development at this point; Cross-country market potential – possibly as part of Loch Lomond Epic route; Too much existing visitor pressure and small forest, limits opportunity.
Callander Craggs	<ul style="list-style-type: none"> The Craggs are located just outside Callander (an idyllic scenic town located in the heart of the Trossachs). Access to the town is via the A81 East of Aberfoyle; A steep 4 miles climb to the top of the Callander Craggs offers excellent views high above Callander and as far as Ben Ledi; The Craggs have been subject to an initial feasibility study for a 'chairlift'. 	<ul style="list-style-type: none"> Currently no identified cycling market and or product in this forest area; See National Cycle Network Sustrans Route 7 which passes through Callander; See Wheels Cycle Centre under Achray Forest. 	<ul style="list-style-type: none"> Access to local population (largest settlement in National Park); Craggs already established as a visitor and local short walk area / destination; Good links to Callander; Good viewpoints. 	<ul style="list-style-type: none"> Considerable visitor presence, dog walkers ie Bracklinn Falls; Small constrained isolated forest area; No links to other forests / routes; Direct road access limited with small car parks; Main Callander car park full during summer; Would satisfy single cycle market approach (ie downhill); No opportunity to attract cross-country or family markets; Rather small forest, attractive in parts. However, it does suffer from a lack of quality recreational routes and waymarking; Path erosion and liable to landslip; Resistance from local community and local woodland walk groups. 	<ul style="list-style-type: none"> Three popular walks in the area are the Callander Craggs, the Bracklinn Falls and a walk along the Kelty Water. Walks begin at the Bracklinn Falls car park on Station Road. 	<ul style="list-style-type: none"> Little wider cycling benefits identified. Many constraints to cycling in this already congested area – consultants recommend no direct development. 	<ul style="list-style-type: none"> No cycling market opportunities; Walking and day visitor markets only.

COWAL AND TROSSACHS FOREST DISTRICT							
Reference Area	Forest Characteristics	Forest Cycling Development History	Strengths	Weaknesses	Existing Forest Recreation and Wider Tourism Infrastructure Provisions	Wider Benefits	Market Opportunities
Trossachs Focus							
Loch Ard	<ul style="list-style-type: none"> Situated between the outskirts of Aberfoyle and the foothills of Loch Lomond lies the Great Forest of Loch Ard. Its main access is via the B829 from Aberfoyle; Terrain in the forest differs from gentle in the South to mountainous in the North. There are many lochs and two important rivers: the Duchray Water and the Kelty Water; This large forest has a wide range of wildlife: red and roe deer, capercaillie, red squirrel, woodpecker, blackcock, wood ants, wood wasps, barn owls, and an array of plants and fungi; There are five key access points to the forest. 	<ul style="list-style-type: none"> Loch Ard Forest has a long history of recreation it mainly includes: walking, horse riding and cycling; Visitors to each of the five car parks are offered circular walks and cycle routes; Loch Ard Forest has a vast network of forest roads which have previously been signed to form 'traditional forest road' cycle routes; The focus of cycling is at either Milton (where routes are flatter) along routes South of Loch Ard or from Aberfoyle / Kirkton in the South-East between the Kelty and Duchray Waters, along the banks of the River Forth; The long-distance National Cycle Network Sustrans Route 7 links with the forest through Aberfoyle and along the course of a dismantled railway. The new bridge over the River Forth connects the forest to the National Cycle Network Sustrans Route 7; In the past this forest has had seven waymarked forest road cycle routes: <ul style="list-style-type: none"> A 15 miles green loop starting at Milton and crossing the forest to Gartmore; A 7 miles blue route from Aberfoyle along the South banks of the Duchray Water; Two 9 miles circular red routes one from Milton and the other Gartmore; Two 4 miles purple routes, again one from Milton and the other Gartmore; A 25 miles yellow route – the Loch Ard orbital beneath Ben Lomond. Two new strategically positioned bridges across the Duchray Water and the River Forth means that the two parts of the forest are now connected therefore offering great cycling, walking and riding opportunities in future. 	<ul style="list-style-type: none"> Large forest area with large visitor catchment; Good network of forest roads; A large number of relatively flat routes; Good views and points of interest ie aqueducts, bridges, lochs etc; A large forest so visitor pressure dissipated; Few environmental issues; Links to National Cycle Network Sustrans Route 7; Close to Aberfoyle re economic spin-off; Forest already used by horse riders, walkers, cyclists and fishermen; 'Traditional' forest – cycle routes already well known; Forest used by family and older cyclists; The recently developed bridges across Duchray Water and River Forth provide key strategic route links and open up possibilities for the future trail development; The forest links well with Aberfoyle re visitor centre information, toilets, refreshments, retail opportunities; The forest is in the Loch Lomond and the Trossachs National Park; The forest is an integral part of a recognised tourism / day visitor destination. 	<ul style="list-style-type: none"> Terrain in parts rather too flat for some markets; The car park at Milton difficult to find, slightly remote two miles from Aberfoyle; Away from current forest visitor focus at David Marshall Lodge; Physically separated from Achray forest by A821; No single track development at present; Currently no cycle infrastructure support in Aberfoyle (excluding Glasgow Mountain Biking Club aspirations); Mineral in forest considered too fine by FCS for significant areas of single track development. It will be possible to construct single track by importing harder wearing surface, although this will significantly increase construction costs. 	<ul style="list-style-type: none"> There are five main points of entry to the forest re recreational activity, they are Lemahamish, Kinlochard, Milton, Aberfoyle village car park and Drymen road car park – in each case camping, fishing, cycling, walking and horse riding access is functional; Well-known walks include: the Milton, a 2½ hours, 3¼ miles trail (accessible by foot / cycle or by horse); the Lemahamish, a ¾ hour, ¾ mile trail; Doon Hill, a 1½ hours, 12¼ miles route; the Balleich Trail, a 2½ hours, 3¼ miles route; the Lochan Sping Walk, a 2½ hours, 3¼ miles walk; and the Garbeg Hill Walk, 3½ hours, 5½ miles trail; See previous for cycle routes; Family-orientated destination. 	<ul style="list-style-type: none"> Being so close to Aberfoyle means economic spin-off for the local village re food / drink / accommodation / cycle hire and travel etc; Wider economic impact generated via overnight tourism demand in Trossachs; Future 'family' cycle routes will complement Queen Elizabeth Forest Park facilities in Achray Forest; Trossachs has the potential to grow into national cycling centre; Significant social and health benefits due to its proximity to a mass population base; Opportunity to open up mountain biking to a lot of untapped markets via testing re social and geographical groups; Area is already very popular and visitor pressures, traffic issues and access may become a more reverent concerns; Roads becoming too busy and congested – 'off-road' alternative. 	<ul style="list-style-type: none"> Attractive proposition as an initial introduction to off-road forest cycling ie for all age groups from novices through to experienced riders re long Cross-Country Epic potential; Fit with local outdoor activity providers / centres in the area; Enhance / fit with market profile of the area (ie National Park); Day visitors from Central Belt and Glasgow in particular; Overnight / tourist visitor market potential; Promote as integral part of Loch Lomond and the Trossachs National Park facilities ie visitor markets UK and overseas; Family cycle market; Older persons cycle market; Opportunity to attract heritage-related market re sculpture and history; Opportunity to link into local schools and social inclusion market.

COWAL AND TROSSACHS FOREST DISTRICT							
Reference Area	Forest Characteristics	Forest Cycling Development History	Strengths	Weaknesses	Existing Forest Recreation and Wider Tourism Infrastructure Provisions	Wider Benefits	Market Opportunities
Trossachs Focus							
Achray	<ul style="list-style-type: none"> Achray Forest lies at the heart of the Queen Elizabeth Forest Park. The Forest sits astride the Duke's Pass between Loch Achray and the Trossachs to the North, and Aberfoyle to the South. Access is via the A821 Aberfoyle North and Callander West route; Achray Forest offers superb views across the Trossachs to Loch Venachar and beyond; The David Marshall Lodge Forest Visitor Centre is also found within the forest attracting some 140,000 visitors per annum. It offers a good focus for visitors to explore Achray Forest; The Forest provides a diversity of recreational experiences: sightseeing, walking, cycling, horse riding, canoeing, fishing and sailing etc. 	<ul style="list-style-type: none"> The National Cycle Network Sustrans Route 7 crosses the forest; Extensive network of forest roads already being heavily used by recreational users ie, holiday and local cycle clubs; Various sections of single track construction / development have been undertaken by the Glasgow Mountain Bike Club; Glasgow Mountain Bike Club regularly hold cross-country events and excursion trips in Achray Forest; Mountain bike route publications have revealed that there were four signed forest road routes in Achray Forest ranging from about 3 or 4 miles to 14 miles; The National Cycle Network Sustrans Route 7 links the forest with Aberfoyle and Callander; Strategic links with private sector bike hire, cycle retail, meeting room, accommodation providers – Wheels at Loch Venachar. 	<ul style="list-style-type: none"> Good for cross-country developments links to Epics; Sustrans links (National Cycle Network Route 7); David Marshall Lodge visitor facilities and café; Good network of existing forest roads; Area utilised by cyclists and network of trail developments, Glasgow Mountain Bike Club; Fine panoramic views; Diverse forest structure adding interest; Diverse terrain and drainage features – waterfalls, rivers and lochs; Area already used by activity providers ie Dounans Centres; Area already well used by cyclists (see Wheels); Highland Boundary Fault; Path / cycle links to Aberfoyle although rather steep for family markets; Key visitor destination within Loch Lomond and the Trossachs National Park; Visitor numbers to the David Marshall Lodge have increased by 40,000 in the last three years. 	<ul style="list-style-type: none"> Car parks full at David Marshall Lodge on busy weekends; Cycle safety issues on forest roads with fast descent sections including National Cycle Network Sustrans Route 7 (see Epic routes); No formal single track routes developed as yet; David Marshall Lodge café visitor pressure at peak periods; Visitor pressure at peak times in forest; No direct links to cycle trails from David Marshall Lodge – link trails and river crossings need to be constructed; David Marshall Lodge listed extensions not possible; Thin layer of mineral soil on some upper slope areas; Car park too small at peak periods. 	<ul style="list-style-type: none"> David Marshall Lodge open daily, offers a variety of indoor facilities which includes a permanent wood carver, lunch, snacks, retail, toilets et al. Outdoor activities include orienteering, guided walks, children's play area, and live pictures of Aberfoyle Osprey; There are also three waymarked walking routes which start from the David Marshall Lodge. They are the Waterfall Trail, Oak Coppice Trail and the Highland Boundary Fault Trail; Recreation at the Dukes pass includes a 7½ miles forest drive, coarse fishing, camping, as well as many forest roads suitable for both walking and cycling; Cycle hire around Loch Katrine looking to double number of bikes to 250. Significant linking opportunities in evidence; See Wheels at Loch Venachar. 	<ul style="list-style-type: none"> The forest offers much wider economic benefit re its regional / national potential and also because of its closeness proximity to the mass catchment market of Central Scotland; Significant economic benefit to local surrounding area ie tourism / travel and trade; Significant social and health benefits due to its proximity to a mass population base; Opportunity to widen mountain bike market ie untapped social and geographic markets; Opportunity to link with other service infrastructure re David Marshall Lodge and to create a national destination cycle product; Linking with Achray Forest will help to develop and build on the quality and brand awareness, integrate family markets and bring children to the sport; Area is already very popular and visitor pressures, traffic issues and access may become more relevant concerns. 	<ul style="list-style-type: none"> Potential to create a national purpose-built mountain bike centre; It should be positioned as a key mountain bike and 'off-road' cycle destination for the Loch Lomond and the Trossachs National Park and Scotland; There is a real opportunity to appeal to as wide a market as possible; Day visitors from within a one-hour drive time – filling the gap for Glasgow; Overnight tourists to destination Loch Lomond and the Trossachs National Park to cycle whilst on holiday; Short break mountain bike enthusiasts; Visitors to friends and relatives; Activity centre operators – see Wheels / Dounans Outdoor Centre; School and youth groups; Cross-country event cyclists; Families and novices; Older cyclists excursionists and older tourists; Single track enthusiasts from beginner to advanced with cross-country focus; Promote links to wider activities available within Loch Lomond and the Trossachs National Park – walking, fishing, camping, sightseeing; Opportunity to introduce mountain boarding as secondary sport opportunity (see Perth focus); Opportunity for other forest recreational products, given scale of market catchment.

COWAL AND TROSSACHS FOREST DISTRICT							
Reference Area	Forest Characteristics	Forest Cycling Development History	Strengths	Weaknesses	Existing Forest Recreation and Wider Tourism Infrastructure Provisions	Wider Benefits	Market Opportunities
Cowal Focus							
Ardgartan	<ul style="list-style-type: none"> Situated on the Shores of Loch Long, and 3 miles from the village of Arrochar is Ardgartan Forest. It has magnificent viewpoints, rugged hills and acts as a gateway to Argyll Forest Park and the Cowal peninsula; Loch Long is a landmark feature of the Southern Cowal with biodiversity and important landscape; The forest area is surrounded by distinctive / iconic summits ie the Cobbler and Ben lme; The forest is located just off the Western Shore of Loch Lomond (A82), and is easily accessible to the densely populated Glasgow market ie within a one-hour drive time. It also serves as a good local forest facility for the people of Argyll and West Dunbartonshire; The Ardgartan area is a well-known tourist base for people looking to explore the Argyll peninsula / the Southern / Western Highlands. 	<ul style="list-style-type: none"> There is currently no purpose-built single track cycle development; There are however, three existing waymarked forest road cycle routes, including the Cat Craig Cycle Loop, a 5 miles circular encompassing spectacular views over Arrochar and good panoramic views over the Cobbler and Glen Croe. The Ardgartan Peninsula Circuit, a 20 miles loop offering wild rugged and remote views over the Clyde along predominately existing forest roads; There are local aspirations to grow Ardgartan into an international standard training and competition venue encompassing four grades of trail and cross-country race course; Scottish Downhill Association has aspirations for Downhill route in Ardgartan. 	<ul style="list-style-type: none"> Extremely good access off A83; The Argyll Forest Park area is part of Loch Lomond and the Trossachs National Park; Existing FCS Visitor Centre information, retail; confectionary; Good views, due to steep terrain of Ardgartan Peninsula; Ardgartan loop to Lochgilphead well known and used by cross-country and fitness market; Recent construction of A83 crossing multi-purpose path has linked Succoth and Allt Coiregrogan to Ardgartan; Arrochar car parks offer additional cycle loop route via Succoth / Coiregrogan and Glen Loin; Coilessan Car Park in heart of the forest is accessible to the public; Recent multi-purpose link is available to the public and the Cobbler offers cycle access to Succoth forest roads; A short multi-purpose path has been developed on Tarbet Isle; Coilessan Glen footpath offers additional link opportunities to Lochgilphead. 	<ul style="list-style-type: none"> There is no purpose-built single track cycle development at present – forest roads only; Linear nature of forest particularly of Ardgartan West Shore Loch Long is a development disadvantage; Terrain in some areas is particularly steep; Fast descents on forest roads particularly Glen Croe causes safety issues; There is often visitor pressure in Arrochar car park; Glen Loin under utilised, however route would erode under heavy cycling pressure; The forest lacks diversity in many areas mainly Sitka Spruce with small areas of broad wood; In areas there is intense tree cover, views need to be opened up; Current signed forest road routes are rather limited and lack terrain variety. 	<ul style="list-style-type: none"> Ardgartan Visitor Centre is easily accessible to all users ie picnicking, walking, cycling and sightseeing; The Arrochar, Tarbet corridor is an important cultural destination for visitors ie West Highland Line railway heritage; The surrounding forest area has good car park provisions and public access points, including: Rest and Be Thankful; High Glen Croe; Ardgartan Visitor Centre; Arrochar and Coilessan; Includes Loch Shore campsite and boat launching facilities, sailing, fishing, mountaineering and pony trekking, and Ardentinnny Outdoor Centre is close by; Two mapped walks are available: the Riverside Walk, a 1 hour, 1¼ miles, red loop; and the Boat House Walk, a 2 hours, 2 miles red loop; Ardgartan is a well-known walking and climbing / abseiling destination – particular popular with outdoor groups ie military, schools, youth groups; Ardgartan Caravan Park is located on the Shores of Loch Long; Network of forest tracks multi-purpose routes through richly mixed forest woodland and offers longer links to Lochgilphead; Good level of overnight accommodation in area and good tourism infrastructure. 	<ul style="list-style-type: none"> High military demand / usage re adventure training / cycling; Ardgartan Forest focus and its Visitor Centre which attracts 50,000 visitors per year – closed during winter; Forest loops are being actively used by the outdoor activity centres in and around Argyll Forest Park, local / community demand and seasonal tourists; Outdoor Activity Centres are using mountain biking ever more frequently. Centres are dealing with children with health / social issues and mountain biking is being increasingly seen as a educational / leisure tool for specialist groups; Cycling also popular with youth groups / corporate groups and weekend groups re outdoor centres. 	<ul style="list-style-type: none"> Build on the geographical potential of the area re product development and brand awareness. Ardgartan is only one hour away from Glasgow – significant day visitor market potential; National Park have identified Loch Long as area with water recreation opportunity. Cycling links / opportunities should be built into this demand, both commercial and military association; Increasing overall outdoor activity credentials of Loch Lomond and the Trossachs National Park; Only 'military' forest in Scotland – opportunity to promote and market more intensively; Opportunity for Ardgartan to be developed as cross-country venue linking Cowal with Loch Lomond; Opportunity to attract fitness market.

COWAL AND TROSSACHS FOREST DISTRICT							
Reference Area	Forest Characteristics	Forest Cycling Development History	Strengths	Weaknesses	Existing Forest Recreation and Wider Tourism Infrastructure Provisions	Wider Benefits	Market Opportunities
Cowal Focus							
Glenbranter	<ul style="list-style-type: none"> Glenbranter was the origin of FCS' enterprise in Cowal. The first trees planted on the peninsula took place around Glenbranter in 1922. In fact the village of Glenbranter evolved out of the forest developments of the 1950s; Located off the Western Shore of Loch Lomond (A82). Glenbranter is in the heart of the Argyll Forest Park, 3 miles South of Strachur on the A815; The start of all forest recreation is Lauder car park and it includes a recently constructed visitor centre and toilet facility; The area is full of upland hills and ridges and is synonymous by its tranquil character, good views and large variety of unusual rhododendrons. 	<ul style="list-style-type: none"> There are three mapped and waymarked forest cycling tracks – although there is no single track development; The Glenshellish Loop Cycle Trail is a 1½ hours, 8 miles loop with views of Beinn Bheula and Beinn Laggan. The Glenbranter Cycle Splash is a 1 hour, 5½ miles steep / difficult graded circular loop. It provides a variation of terrain and challenges and includes waymarked footpaths linking into the cycle route. The Loch Eck Shore Cycle Trail is a 1½ hours, 9 miles out and back, easy graded trail. The trail uses forest roads and is relatively flat along the West Shore of Loch Eck and offers attractive views across to the hills of Cowal; A black grade single track cycle route is currently proposed and the route has been 'pegged out'. 	<ul style="list-style-type: none"> Good access off the A815; Existing Visitor Centre and toilets attract school groups and independent visitors; Existing car parking with overspill facilities; Established network of walks; Good network of existing forest roads and quad bike tracks; Previous cycle product including three forest road routes; Long-distance, low level route already created around Loch Eck (30km) but not signed; Extremely good views particularly Loch Eck route; The Loch Eck route easily accessed at Glenbranter or Benmore Gardens; Refreshments and toilet facilities at Benmore Gardens or Whistlefield; Good links to other recreation facilities / routes; There are a number of potential users including outdoor centres ie Benmore Outdoor Centre; The Loch Eck route is relatively flat and fast; Loch Eck viewed as an Epic route due to its views; Educational forest resource centre at Glenbranter. 	<ul style="list-style-type: none"> Glenshellish is a rather inward looking glen with little tree diversity; Felling in Glenshellish is due to commence over next 10 years; Rather limited number of flat routes to create circular family cycling; Few escape routes on Loch Eck route (committed); There are currently no refreshment facilities at Glenbranter; The routes are within narrow glens – difficult to link to other glens; Glenshellish and Glenbranter are not viewed as Cross-Country Epics – forest circuits only. 	<ul style="list-style-type: none"> The main activities at Glenbranter are walking, cycling, quad biking and fishing; There is a good network of forest walking and this includes three circular walks including the Waterfalls Walk a 1½ hours, 2 miles, loop, the Broad Leaves Walk, a ½ hour, ¼ mile loop offering good views of Loch Eck and the Conifer Walk, a 1 hour, 1¼ miles loop which holds remnants to ancient oak woodlands; Interpretation and waymarked routes are provided; The forest fauna includes Red deer, Red squirrel and Roe deer as well as the Golden Eagle and Black Grouse watching / walking. 	<ul style="list-style-type: none"> Any cycle development offers some social and health opportunities for the youth of the local community; The cycle project can help to improve the quality of life of this local community, improve health, fitness and wellbeing, particularly in young people and families; Opportunity to promote tourism potential of wider areas linked with Benmore Gardens and Kilmun Arboretum; Glenbranter offers opportunity for linkage it wider routed networks links to route from Ardentinnny to Kilmun link to Loch Eck experience; Encourage visitors to stay longer in the area. 	<ul style="list-style-type: none"> Growing market demands for Epic routes, mean there are opportunities to develop market links between local destinations Glenbranter, Lochgilphead and Ardgartan (via Beinn Lyons); Link / target walking markets which are very popular in the area; Day visitors, and predominately the capital mass market of Glasgow just over a one-hour drive; Overnight tourists / caravan parks / camping; Weekend Glasgow / West Central Scotland market; Links with active tourist already in the area; Penetrate the outdoor activity centres keen to capitalise on the growing popularity of the cycling market; Low / medium skill level market re cross-country and forest road links; Fits with schools outdoor education remit; Older visitor profiles.

COWAL AND TROSSACHS FOREST DISTRICT							
Reference Area	Forest Characteristics	Forest Cycling Development History	Strengths	Weaknesses	Existing Forest Recreation and Wider Tourism Infrastructure Provisions	Wider Benefits	Market Opportunities
Cowal Focus							
Dunoon	<ul style="list-style-type: none"> Dunoon is the capital of Argyll and is also the Southernmost part of the Argyll Forest Park – it is accessible by car ferry from Gourock as well as the A815 Glenbranter road; The Kyles of Bute waters offer fantastic panoramic viewpoints from the village and the forest alike; The area is synonymous with exotic tree species which are present within Benmore Botanic Gardens and Kilmun Arboretum. These present a particularly rich resource contributing to local landscape character (see links to Glenbranter). 	<ul style="list-style-type: none"> Existing forest roads only; There are no natural / circular loops with signage at present; In future fine roads will be built in adjacent private forests which will link to Loch Eck; Scottish Downhill Association have identified possible opportunities for future development. 	<ul style="list-style-type: none"> Forest has direct access from Dunoon – can cycle from town to ferry terminal; Maximise local community usage; Day visitor opportunities; Forest with very good views over Firth of Clyde; Large area of clear fell which will make route development easier; Continued forest harvesting may increase future need for forestry road development – future circular loop possibilities; WIAT opportunities. 	<ul style="list-style-type: none"> Car parking in outskirts of town off coast road; FCS only have right of access over approach route ie residencies and other owners; Access / approaches poor and untidy – not controlled by FCS; Due to larger areas of clear fell, enhanced views but lessen terrain diversity; Fairly steep approaches into forest; Currently no natural circular routes using existing forest road structure, new (return) routes would have to be created; Motorbikes nuisance in forest. 	<ul style="list-style-type: none"> Forest roads which are used for both walking and cycling purposes; There is local motorised vehicle activity within the forest; The village and forest benefits from links to other forest recreation in and around Southern Cowal, including: two forest walks at Ardentinny and Glenfinnart which offer super views across to Loch Eck. The Kilmun Arboretum to the North of Dunoon is laced with footpaths and a unique variety of exotic tree species; and Benmore Botanical Gardens which offers a variety of access routes for walkers and cyclists. 	<ul style="list-style-type: none"> Socially inclusive with good opportunity to link with local schools and Council-led health / educational initiatives ie STRAMASH; Opportunity to introduce sport as well as health benefits for the youth of the area; Satisfy local demand aspirations; Opportunity to build community partners and volunteer links but must be enthusiastic and 'champion' the project; Cycling has the opportunities to benefit the community (economically) via outdoor activity providers and also outdoor watersport linkages. 	<ul style="list-style-type: none"> Dunoon seasonal – tourist opportunity; As a result any development would foremost be for the local / community markets; Social inclusion-driven project for youth; Create volunteer labour force ie local / community focus; Local / youth market re fun park area / outdoor activity centres; Small well-focused facility driven by community; Opportunity to link with Epic Cowal Forest adding cycling events – could link into market opportunities / cross-country market in future; Fits with local schools outdoor education remit; Opportunity in longer term to attract day visitors from West side of Glasgow; Attractive to VFR market; Visitors to the area's caravans / campsites.

A2 STRATEGIC POSITIONING AND TARGET MARKETS – COWAL AND TROSSACHS FORESTS

A2.1 Introduction

Continuing on from the review and appraisal of each forest area as detailed in Section A1, the consultants now present a summary of the recommended strategic positioning and target markets for each forest cycling loci currently under consideration in Cowal and Trossachs.

A2.2 Strategic Positioning

The strategic positioning of a future purpose-built centre in Cowal and Trossachs has been considered against the development criteria as outlined in Section 5 of this report. The strategic positioning reflects an indication of the market potential, likely level of economic benefit re local, regional and national impacts, and the scale of product development, links to infrastructure and wider tourism destinations. In some cases the consultants have grouped one or more forests together, where for positioning and critical mass purposes the destination / development reflects more than simply one forest area ie Achray Forest and Loch Ard Forest. These forests would be marketed together as a national centre for forest cycling – Cycle Destination Loch Lomond and the Trossachs National Park. The consultants' positioning conclusions for each forest within the district are provided as follows.

COWAL AND TROSSACHS FOREST DISTRICT – STRATEGIC MARKET AND PRODUCT POSITIONING

	Local Centre			Regional Centre	National Centre	Cycle Through Route	Conclusion on Positioning Opportunity
	Type A	Type B	Type C				
	Volunteer Enthusiasts	Wider Access / Inclusion For All	Tourism				
Trossachs Focus				Wider Market Appeal	National Appeal	Links	
Glen Finglas / Ben A'an	<ul style="list-style-type: none"> No volunteer cycle base. Main driver of any development would be linked between FCS and Woodlands Trust. 	<ul style="list-style-type: none"> Access opportunities for all, with links to Woodlands Trust developments; Build strong community enthusiasm which is directly linked to the wider objectives of the Woodland Trust ie access. 	<ul style="list-style-type: none"> Build on existing target markets re forest cycling and walks. Wider tourism benefits not integral to development. Part of Epic product link. 	<ul style="list-style-type: none"> Forest / location and infrastructure, not regional feel; Limited visitor short break potential; Must be community-driven. 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> No designated through routes, however where FCS Estate land is linked to Woodland Trust, through route opportunities exist re Balquidder and Sustrans route. 	<ul style="list-style-type: none"> Local facility Type B and C re wide access opportunities and Epic links.
Strathyre	<ul style="list-style-type: none"> Downhill volunteer base established for one-off annual event; Niche product offering; Informal plans to develop further provisions; Quality product servicing known market needs; Product differentiation. 	<ul style="list-style-type: none"> Downhill is a niche market with little wider access opportunities ie niche nature of product; Epic long-distance access opportunities; National Cycle Network Route accessible to all. 	<ul style="list-style-type: none"> Epic / cross-country markets re alignment to long-distance Sustrans route; Downhill events generating overnight stays, building destination appeal. 	<ul style="list-style-type: none"> Limited appeal re location / forest sustainability. Good local facility offering niche product value; Difficult to build wider regional volunteer base. 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Link to long-distance National Cycle Network Sustrans Route. 	<ul style="list-style-type: none"> Local facility Types A and C re wide access opportunities and Epic links.
Garadhban	<ul style="list-style-type: none"> No local volunteer / community base identified; No development opportunity under this strategic market. 	<ul style="list-style-type: none"> Fully inclusive access for all re short circular route using existing forest roads only. 	<ul style="list-style-type: none"> Opportunity to perhaps become a local visitor tourist provision facility servicing people in Drymen; Increase tourist 'cluster' of recreation provisions in area. 	<ul style="list-style-type: none"> No strategic regional development potential – no single track or mass market opportunity. 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Part of wider Trossachs mountain bike offering and possibly part of Epic product. 	<ul style="list-style-type: none"> Local facility Types B and C with cycle through route potential.
East Shore of Loch Lomond	<ul style="list-style-type: none"> Currently no volunteer base and no identified desire for community involvement in the future. 	<ul style="list-style-type: none"> Access for all is limited; Visitor pressures are high and walking is the dominant leisure activity in this area; Area not suitable for substantial mountain bike development re terrain and visitor pressures. 	<ul style="list-style-type: none"> Opportunity to link in with existing tourist area; Provides additional tourist infrastructure to area; No centralised facilities required; Opportunity to sign existing forest roads only – if at all. 	<ul style="list-style-type: none"> Access issues and visitor constraints resulting from West Highland Way mean development potential is limited. 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> No links to other forest routes of note identified; Links with West Highland Way; Link to Epic. 	<ul style="list-style-type: none"> Local facility Type C; Not strategic; Actively discourage cycle development.
Callander Crags	<ul style="list-style-type: none"> No volunteer base evident, however could be possible to develop volunteer / community base re Callander centre of population in the Trossachs. 	<ul style="list-style-type: none"> Fully inclusive, accessible for all – important must consider Callander population base; Opportunity to build community / inclusion partnership. 	<ul style="list-style-type: none"> Callander is a recognised tourist destination. Single track cycling would add to its destination appeal although currently links to a National Cycle Network; However nature of product development ie chairlift / gondola interest would be significant / costly; Visitor pressures. 	<ul style="list-style-type: none"> No regional development potential. 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Callander visitor service Centre and direct link to National Cycle Network. 	<ul style="list-style-type: none"> Through route only; Not strategic; Actively discourage cycle development.

COWAL AND TROSSACHS FOREST DISTRICT – STRATEGIC MARKET AND PRODUCT POSITIONING

	Local Centre			Regional Centre	National Centre	Through Route Cycle Link Links	Conclusion on Positioning Opportunity
	Type A Volunteer Enthusiasts	Type B Wider Access / Inclusion For All	Type C Tourism				
Trossachs Focus							
Loch Ard / Achray – Queen Elizabeth Forest Park	<ul style="list-style-type: none"> Very successful local volunteer / cycle club network including clubs from both Glasgow and Stirling; Possibilities to build stronger links to community development organisations / steering groups; High local usage due to access and network of trails. 	<ul style="list-style-type: none"> Fully inclusive access for all. Forest has extensive leisure facilities, cycling offers and additional access opportunities; Opportunities to build social inclusion partnership with local centres / Local Authority initiatives; Loch Ard more inclusive for novices, disabled etc. 	<ul style="list-style-type: none"> Forest already a recognised visitor destination ie David Marshall Lodge; Caters well for tourist / cycling demands; Enhances product value of forest loci; Product differentiation; Create overnight visitor new activity demand. 	<ul style="list-style-type: none"> Proposed cross-country network of regional significance; Include green / blue, red and black trails; Include signature trails; Market base will be wide and will include novice / beginner markets as well as highly skilled levels. 	<ul style="list-style-type: none"> Existing centralised service facilities; Area is recognised destination, includes accommodation / food, drink and 'other' service infrastructures; Has national brand expectations / quality; Population centre to merit national skills. 	<ul style="list-style-type: none"> National Cycle Network crosses both forests; Epic routes area, key product linkage for these forests to maximise opportunity. 	<ul style="list-style-type: none"> A cycle centre for all, with national potential.
Cowal Focus							
Ardgartan	<ul style="list-style-type: none"> No volunteer base identified; Possibilities to develop volunteer / club base in the future (Tarbet, Arrochar, Helensburgh). 	<ul style="list-style-type: none"> Fully inclusive access for all; Opportunity under social inclusion partnership ie activity centre / product needs; Already heavily used by walkers, climbers and cyclists; Popular with the military. 	<ul style="list-style-type: none"> Recognised cycling destination; Popular with overnight military use / activity centres; Visitor short break opportunities re links; Possibilities to become popular Epic / long-distance cycling destination. 	<ul style="list-style-type: none"> Location not ideal for regional centre. Access issues re transport and congestion; Some regional aspirations constrained due to small market appeal; Possible links to Lochgilphead. 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Through route opportunity linking Epic trails with Lochgilphead; See long-term National Cycle Network aspirations. 	<ul style="list-style-type: none"> Local facility Type B and C and key through route links to Lochgilphead / National Cycle Network.
Glenbranter	<ul style="list-style-type: none"> Very little volunteer / community base; Difficult to build up larger volunteer base re small population catchments. 	<ul style="list-style-type: none"> Links to social inclusion markets ie activity centres and Local Authority initiative may be possible; Satisfy local markets needs. 	<ul style="list-style-type: none"> Opportunity to build overnight visitor market. However little wider tourism service infrastructure in place – low visitor volumes. 	<ul style="list-style-type: none"> No regional development potential. 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Part of Epic mini route round Loch Eck; Through route links to Lochgilphead and Ardentinn / Dunoon. 	<ul style="list-style-type: none"> Local facility Type C; Strategically more important to cement Epic route.
Dunoon	<ul style="list-style-type: none"> No club or community enthusiasm; Must develop a community base, paramount for future development opportunity. 	<ul style="list-style-type: none"> Accessible to all; Opportunities to grow / develop social inclusion around community-driven initiatives. 	<ul style="list-style-type: none"> Links to Glenbranter and Greenock offer limited tourism opportunities. 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Links to Glenbranter (although not specifically through routes) are the main opportunities. 	<ul style="list-style-type: none"> Local facility Type A and B.

Market Fit

Based on the strengths and weaknesses analysis and the general market opportunities identified, together with an understanding of the general terrain and forest structure, the following summary tables of cycling target markets have been prepared.

The cycle target markets adopted are those which have been highlighted and defined in Section 4. The key forest areas in Cowal and Trossachs Forest District under study have been considered against the relative / potential strengths of the product which could be developed due to the current level of development, terrain, strategic positioning etc.

TARGET MOUNTAIN BIKE MARKET OPPORTUNITIES							
	Families / Schools / Social Inclusion	Novice	Enthusiast	Cross-Country ⁽¹⁾	Downhill	Events	Freeride
Trossachs Focus							
Glen Finglas / Ben A'an	X	X	✓	✓✓	X	X	X
Strathyre	✓✓ ⁽²⁾	✓✓ ⁽²⁾	✓	✓✓	✓✓✓	✓✓	✓
Garadhban	✓	✓	X	✓	X	X	X
East Shore of Loch Lomond	✓	✓	X	✓	X	X	X
Callander Craggs	X	X	✓	X	X	X	X
Loch Ard / Achray – Queen Elizabeth Forest Park	✓✓✓	✓✓✓	✓✓✓	✓✓✓	X	✓✓	✓✓
Cowal Focus							
Ardgartan	✓✓	✓	✓✓	✓✓✓	X	✓✓	X
Glenbranter	✓✓	✓✓	✓	✓✓	X	X	X
Dunoon	✓✓	✓✓	X	X	X	X	✓✓

Notes: (1) Includes potential for Epic route product (see Section 8).

(2) National Cycle Network Route only.

TARGET MARKET SKILL LEVEL				
	Novice	Intermediate	Advanced	Events
Trossachs Focus				
Glen Finglas / Ben A'an	-	Medium	-	-
Strathyre	High	Medium	High	Downhill (Scottish Downhill Association)
Garadhban	Low	Low	-	-
East Shore of Loch Lomond	Medium	Medium	-	-
Callander Craggs	High	High	-	-
Loch Ard / Achray – Queen Elizabeth Forest Park	High	High	High	Cross-Country Endurance Triathlon
Cowal Focus				
Ardgartan	Medium	High	High	Cross-Country Endurance Triathlon
Glenbranter	Medium	Medium	Medium	-
Dunoon	Medium	Medium	Medium	-

A2.3 Centre for Forest Cycling Positioning Summary

- As can be seen from the previous tables, the Achray / Loch Ard forest area appeals to the widest range of markets to both cycle and other recreation and tourism products and has the widest linkages. Therefore its positioning as a potential national centre of ‘world-class’ acclaim is warranted. It already has central facilities, coffee shop and attractions at the David Marshall Lodge, and an extensive network of forest trails. Future single track development will consolidate and link well the existing cycling market, while at the same time capitalising on the growing popularity of the sport by attracting new markets excited by the national centre within Loch Lomond and the Trossachs National Park. Direct links to the National Cycle Network and the potential Epic brand, strengthens the Trossachs as a cycle destination;
- Strathyre appeals to its existing informal downhill market and this is consistent with advanced / enthusiastic type target markets. A knock-on benefit of the Strathyre downhill is the event spin-off and economic impact generated as a result;
- Forest loci such as Garadhban and East Shore of Loch Lomond have no regional positioning potential. They do not cater for a wide range of markets however they can play a part in wider trail linkages as part of perhaps a Loch Lomond Epic product;
- Ardgartan has an opportunity as a cross-country cycle venue with future strategic links to the National Cycle Network and Loch Lomond. Further links could be exploited to Loch Eck / Glenbranter;
- Glenbranter is about cycling on existing forest roads and the Loch Eck Epic – linkages are again important;
- In the short term, Dunoon will attract a local market and visitors staying in the area’s large caravan parks. These developments should be driven by tempered community aspirations as they emerge. Longer-term day visitor potential may be possible.

There is no doubt that the Cowal and Trossachs region requires a cycling centre of regional significance. The consultants believe that the potential for Queen Elizabeth Forest Park is larger than regional, in fact national, given the linkages to the National Cycle Network, potential Epic routes, smaller recreational initiatives in the area (see Ben A’an, Glen Finglas / Loch Katrine).

If there is the political will within FCS, Loch Lomond and the Trossachs National Park, local / national public agencies, Sustrans, private landowners, Woodlands Trust, SNH etc, then Queen Elizabeth Forest Park could secure a National Centre for ‘off-road’ cycling – attracting a wide market base – a centre for Scotland which could be truly ‘world-class’.

In addition the consultants recommend that wider recreational opportunities linked to the main activities of cycling and walking should be explored.

The consultants believe that with a high quality product mix, there will be the market to support the proposed developments.

A3 PRODUCT DEVELOPMENT AND INDICATIVE TRAIL DEVELOPMENT COSTS – COWAL AND TROSSACHS FORESTS

Based on research findings, strategic positioning and product market fit analysis, the summary of development conclusions are as follows. Please note all indicative trail capital costs outlined exclude design fees and trail development project management costs. These additional costs usually add about 10%-12% to trail development costs.

TRC have estimated potential trail development costs based on benchmark analysis – as highlighted in Section 8. These costs have been presented at 2005 prices.

COWAL AND TROSSACHS FOREST DISTRICT – DEVELOPMENT RECOMMENDATIONS															
	Product Opportunities	Product Development and Outline Trail Costs													
Trossachs Focus															
Glen Finglas / Ben A'an	<ul style="list-style-type: none"> Support Woodlands Trust in multi-user route development; Support creation of trail linkages between Sustrans routes, Cross-Country Epics and purpose-built forest cycling developments. 	<ul style="list-style-type: none"> No direct costs identified for FCS at this time; The development cost of strategic links may be required in future – liaise with partners reroute and signage costs. 													
Strathyre	<ul style="list-style-type: none"> Include Sustrans route as part of Epic cycle product opportunity continue to support through route cycling touring and out and back routes; Support Scottish Downhill Association in use of forest for 'one-off' events. Ensure route safety / risk assessment etc. Do not formalise downhill track at Strathyre. 	<ul style="list-style-type: none"> Continue to work with Sustrans to upgrade sections of Route 7 as required; See National Cycle Network; See National Strategy re Scottish Downhill Association opportunities. 													
Garadhban	<ul style="list-style-type: none"> No opportunity for purpose-built single track mountain bike development; Do not develop single track in short term; Sign short circular route using existing forest roads only. 	<ul style="list-style-type: none"> Long-distance Epic route – signage costs only. <table border="1"> <thead> <tr> <th></th> <th>Quantity</th> <th>£ per unit</th> <th>£</th> </tr> </thead> <tbody> <tr> <td>Signage</td> <td>10</td> <td>30</td> <td>300</td> </tr> <tr> <td>Total Cost</td> <td></td> <td></td> <td>£300</td> </tr> </tbody> </table>			Quantity	£ per unit	£	Signage	10	30	300	Total Cost			£300
	Quantity	£ per unit	£												
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Total Cost			£300												
East Shore of Loch Lomond	<ul style="list-style-type: none"> Work with private landowners, National Park, SNH etc to create Loch Lomond Classic Cross-Country Epic route; The West Highland Way North of Rowardennan will have to be improved in any event, due to landslip. This should be designed to accommodate the likely small number of mountain bike users looking for the Epic route; North of Inversnaid cycling should still be actively discouraged with the option to cycle the West Highland Way North of Crianlarich / Tyndrum still possible. 	<ul style="list-style-type: none"> Work with partners re possible route. Costs etc cannot be identified at this stage; Long-distance Epic route signage. <table border="1"> <thead> <tr> <th></th> <th>Quantity</th> <th>£ per unit</th> <th>£</th> </tr> </thead> <tbody> <tr> <td>Signage</td> <td>40</td> <td>30</td> <td>1,200</td> </tr> <tr> <td>Total Cost</td> <td></td> <td></td> <td>£1,200</td> </tr> </tbody> </table>			Quantity	£ per unit	£	Signage	40	30	1,200	Total Cost			£1,200
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Callander Crags	<ul style="list-style-type: none"> None. 	None.													

COWAL AND TROSSACHS FOREST DISTRICT – DEVELOPMENT RECOMMENDATIONS																																			
	Product Opportunities	Product Development and Outline Trail Costs																																	
Trossachs Focus																																			
Loch Ard – Linked to Loch Achray to form Loch Lomond and the Trossachs National Forest Cycling Centre.	<ul style="list-style-type: none"> Given the construction of two new key bridges, the whole forest is now linked to Aberfoyle and the National Cycle Network Sustrans Route 7; Reappraise existing upgraded forest road cycle network; Consider new circular route opportunities as a result of new bridges; Reintroduce all previous routes as appropriate with proper signage. Make most of views, features such as aqueducts, bridges, rivers, lochs, waterfalls etc; Introduce a cycle interpretation / sculpture trail aimed at families; Introduce some key sections of 'green level' single track to enable links to be formed but also as a transition from forest roads to blue single track; In the medium to longer term, consider development of full green graded route; Forest road routes should range from circular routes of about 5km up to about a 40km orbital route. The majority of circular routes should be between 10km and 20km in length; There is an opportunity to create a Loch Lomond 70km Epic – a circular route from Aberfoyle via Loch Ard Forest / East Shore of Loch Lomond / Garadhban Forest and National Cycle Network Sustrans Route 7 (see Glentool comparison); There are a number of mini Epic opportunities aimed at families as well as other forest routes; Other Epic routes could include Loch Katrine / Glen Finglas etc. 	<table border="1"> <thead> <tr> <th colspan="4">INDICATIVE TRAIL DEVELOPMENT COSTS</th> </tr> <tr> <th></th> <th>km or Quantity</th> <th>£ per m or £ per unit</th> <th>£</th> </tr> </thead> <tbody> <tr> <td>5-7km green trail</td> <td>5</td> <td>12</td> <td>60,000</td> </tr> <tr> <td>3-5km construction of strategic single track links to Epics etc</td> <td>5</td> <td>15</td> <td>75,000</td> </tr> <tr> <td>2-3km development of sculpture / interpretation trail saving single track cost (coincide with part of green trail above)</td> <td>2</td> <td>20</td> <td>40,000</td> </tr> <tr> <td>Sign extensive forest roads and Epic network</td> <td>150</td> <td>30</td> <td>4,500</td> </tr> <tr> <td>Trail counters</td> <td>4</td> <td>1,250</td> <td>5,000</td> </tr> <tr> <td>Total Cost</td> <td></td> <td></td> <td>£184,500</td> </tr> </tbody> </table>		INDICATIVE TRAIL DEVELOPMENT COSTS					km or Quantity	£ per m or £ per unit	£	5-7km green trail	5	12	60,000	3-5km construction of strategic single track links to Epics etc	5	15	75,000	2-3km development of sculpture / interpretation trail saving single track cost (coincide with part of green trail above)	2	20	40,000	Sign extensive forest roads and Epic network	150	30	4,500	Trail counters	4	1,250	5,000	Total Cost			£184,500
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Achray – Linked to Loch Ard to form Loch Lomond and the Trossachs National Forest Cycling Centre.	<ul style="list-style-type: none"> Opportunity for purpose-built national mountain bike centre in Loch Lomond and the Trossachs National Park; Single track mountain bike centre for all levels of the sport: green, blue, red and black trails to be developed; Link Loch Ard and Achray Forest together to provide national centre for off-road cycling on forest roads in the widest sense; Develop green and ungraded forest routes in Loch Ard area – use Milton as a base; It is envisaged that David Marshall Lodge would form an ideal trail head if car parking can be extended. New links from the lodge to the forest would have to be installed and visitor pressure managed which would be a real challenge; It is recommended that a quality / 'world-class' / sustainable trail network system is developed which appeals to a wide market base, links to Loch Ard and the wider Epic product and National Cycle Network Route opportunities; 	<table border="1"> <thead> <tr> <th colspan="4">INDICATIVE TRAIL DEVELOPMENT COSTS</th> </tr> <tr> <th></th> <th>km</th> <th>£ per m</th> <th>£</th> </tr> </thead> <tbody> <tr> <td>10-15km of Blue Trail</td> <td>10</td> <td>15</td> <td>150,000</td> </tr> <tr> <td>15-20km of Red Trail</td> <td>7</td> <td>15</td> <td>105,000</td> </tr> <tr> <td>25-30km of Black Trail</td> <td>7</td> <td>20</td> <td>140,000</td> </tr> <tr> <td>Additional Blue Link Section</td> <td></td> <td></td> <td>10,000</td> </tr> <tr> <td>Total Cost</td> <td></td> <td></td> <td>£405,000</td> </tr> </tbody> </table> <p>At this stage trail costing has been based on Peter Laing's preferred designs in 2001 but a new plan will be required. The Blue, Red and Black route has been extended.</p>		INDICATIVE TRAIL DEVELOPMENT COSTS					km	£ per m	£	10-15km of Blue Trail	10	15	150,000	15-20km of Red Trail	7	15	105,000	25-30km of Black Trail	7	20	140,000	Additional Blue Link Section			10,000	Total Cost			£405,000				
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Ardgartan	<ul style="list-style-type: none"> • Build on outdoor activity group usage – military and outdoor education markets; • Build on social inclusion re – local community and schools, youth / disadvantaged groups etc; • Opportunity to develop cross-country focus given wilderness and 'big country' feel; • Continue to develop 'fitness' credentials of the area; • Develop year-round demand and interest from both locals and day visitors; • Opportunity to attract overnight tourists staying in Loch Lomond area; • Cross-country focused venue with 'Epic' credentials supported by single loops to create year-round demand and support visitor aspiration; • Improve and re-sign existing three forest cycle routes; • Promote Ardgartan Peninsula route as part of emerging Cross-Country Epic product; • Upgrade current hill footpath (3km) between Coilessan Glen and Lochgoilhead as multi-directional multi-user trail; • Create a new descent from Coilessan Glen by constructing a 1.5km contour trail link to Cat Craig loop. This will create better network alternatives and make better use of Coilessan Glen adding to visitor interest; • Introduce red grade single track loop round Tarbet Isle at high level to obtain forested views over Loch Lomond and Loch Long; • Improve footpath in Glen Loin for multi-users enable it to be part of Tarbet Isle and Allt Coiregrogan Glen routes; 	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4" style="text-align: center;">INDICATIVE TRAIL DEVELOPMENT COSTS (BUILT TRAIL LENGTH)</th> </tr> <tr> <th style="text-align: left;">Phase I</th> <th style="text-align: center;">km</th> <th style="text-align: center;">£ per m</th> <th style="text-align: center;">£</th> </tr> </thead> <tbody> <tr> <td>Strategic multi-user route Coilessan Glen and Lochgilphead</td> <td style="text-align: center;">3</td> <td style="text-align: center;">50</td> <td style="text-align: right;">150,000</td> </tr> <tr> <td>Improve sustainability of Glen Loin trail re multi-user</td> <td style="text-align: center;">4</td> <td style="text-align: center;">10</td> <td style="text-align: right;">40,000</td> </tr> <tr> <td>Improve forest and road descent surfaces in Allt Coiregrogan</td> <td style="text-align: center;">2</td> <td style="text-align: center;">10</td> <td style="text-align: right;">20,000</td> </tr> <tr> <td colspan="3">Total Phase I Development Cost</td> <td style="text-align: right;">£210,000</td> </tr> <tr> <th style="text-align: left;">Phase II</th> <th style="text-align: center;">km</th> <th style="text-align: center;">£ per m</th> <th style="text-align: center;">£</th> </tr> <tr> <td>Investigate / improve ascent up to Coilessan by adding single track sections</td> <td style="text-align: center;">2</td> <td style="text-align: center;">15</td> <td style="text-align: right;">30,000</td> </tr> <tr> <td>Strategic single track descent sections or route alternatives in Glen Croe</td> <td style="text-align: center;">2</td> <td style="text-align: center;">15</td> <td style="text-align: right;">30,000</td> </tr> <tr> <td>High level red grade single track around Tarbet Isle</td> <td style="text-align: center;">6</td> <td style="text-align: center;">17</td> <td style="text-align: right;">102,000</td> </tr> <tr> <td colspan="3">Total Phase II Development Cost</td> <td style="text-align: right;">£162,000</td> </tr> <tr> <th style="text-align: left;">Other Costs</th> <th style="text-align: center;">Quantity</th> <th style="text-align: center;">£ per unit</th> <th style="text-align: center;">£</th> </tr> <tr> <td>Trail counters</td> <td style="text-align: center;">3</td> <td style="text-align: center;">-</td> <td style="text-align: right;">3,750</td> </tr> <tr> <td>Signage</td> <td style="text-align: center;">200</td> <td style="text-align: center;">30</td> <td style="text-align: right;">6,000</td> </tr> <tr> <td colspan="3">Other Costs Total</td> <td style="text-align: right;">£9,750</td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: left;">TOTAL COSTS</th> <th style="text-align: center;">£</th> </tr> </thead> <tbody> <tr> <td colspan="2">Total Phase I Development Cost</td> <td style="text-align: right;">210,000</td> </tr> <tr> <td colspan="2">Total Phase II Development Cost</td> <td style="text-align: right;">162,000</td> </tr> <tr> <td colspan="2">Other Costs</td> <td style="text-align: right;">9,750</td> </tr> <tr> <td colspan="2">Total Costs</td> <td style="text-align: right;">£381,750</td> </tr> </tbody> </table>	INDICATIVE TRAIL DEVELOPMENT COSTS (BUILT TRAIL LENGTH)				Phase I	km	£ per m	£	Strategic multi-user route Coilessan Glen and Lochgilphead	3	50	150,000	Improve sustainability of Glen Loin trail re multi-user	4	10	40,000	Improve forest and road descent surfaces in Allt Coiregrogan	2	10	20,000	Total Phase I Development Cost			£210,000	Phase II	km	£ per m	£	Investigate / improve ascent up to Coilessan by adding single track sections	2	15	30,000	Strategic single track descent sections or route alternatives in Glen Croe	2	15	30,000	High level red grade single track around Tarbet Isle	6	17	102,000	Total Phase II Development Cost			£162,000	Other Costs	Quantity	£ per unit	£	Trail counters	3	-	3,750	Signage	200	30	6,000	Other Costs Total			£9,750	TOTAL COSTS		£	Total Phase I Development Cost		210,000	Total Phase II Development Cost		162,000	Other Costs		9,750	Total Costs		£381,750
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Ardgartan (Cont'd)	<ul style="list-style-type: none"> • Improve interest in forest road ascent up Allt Coiregrogan by adding single track sections; • Improve safety of Epic descents via signage – improve surface of forest roads for cycling particularly in Allt Coiregrogan routes and Glen Croe where there are multi-user conflicts and very rough surfaces. Consider construction on strategic section of single track to improve user safety and improve visitor experience; • Link to Glenbranter / Loch Eck (see Glenbranter forest); • Support National Cycle Network plans to link Tarbet to Arrochar with new roadside cycle route; • Improve links between Ardgartan and Loch Lomond increase opportunity for further Epic links enable visitors to approach by train from Tarbet. 																													
Glenbranter	<ul style="list-style-type: none"> • Improve signage and link sections on existing forest cycling routes; • Do not proceed with proposed single track development – currently 'pegged out' ie not viewed as strategic at this stage (ie supply-led); • Sign existing routes and encourage cyclists along East Shore of Loch Eck – this will be a part of the Epic product; • Complete Lochgoilhead / Ardentinnay link and link to Kilmun, Benmore etc; • Investigate Glenbranter / Lochgoilhead link via Curra Lochain (essential Epic link) – Cowal Way route needs upgraded in this area (work with partners) – contour trail needs to be added East of Curra Lochain to avoid waterfalls (create multi-user trail) strategic part of long-distance footpath and long-distance Epic cycle route; • Create low level return route along West bank of Loch Eck for families / older cyclists this would create short loop possibility – opportunity to use existing parallel forest road if signed. 	<table border="1"> <thead> <tr> <th colspan="4">INDICATIVE TRAIL DEVELOPMENT COSTS (BUILT TRAIL LENGTH)</th> </tr> <tr> <th></th> <th>km or Quantity</th> <th>£ per m or £ per unit</th> <th>£</th> </tr> </thead> <tbody> <tr> <td>A strategic multi-user multi-directional link of 4km Cowal Way upgrade</td> <td>4</td> <td>40-50</td> <td>160,000-200,000</td> </tr> <tr> <td>Improve signage</td> <td>150</td> <td>30</td> <td>4,500</td> </tr> <tr> <td>Trail counters</td> <td>1</td> <td>1</td> <td>1,250</td> </tr> <tr> <td>Complete and upgrade to other links</td> <td>-</td> <td>-</td> <td>Cost unknown</td> </tr> <tr> <td>Total Cost</td> <td></td> <td></td> <td>£166,000-£206,000</td> </tr> </tbody> </table>	INDICATIVE TRAIL DEVELOPMENT COSTS (BUILT TRAIL LENGTH)					km or Quantity	£ per m or £ per unit	£	A strategic multi-user multi-directional link of 4km Cowal Way upgrade	4	40-50	160,000-200,000	Improve signage	150	30	4,500	Trail counters	1	1	1,250	Complete and upgrade to other links	-	-	Cost unknown	Total Cost			£166,000-£206,000
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Dunoon	<ul style="list-style-type: none"> • Work with community to develop a well focused local facility. Community champions will have to be found if this development is to progress at all. Trails should be short and compact built by community enthusiast; • A fun park, freeriding should satisfy local enthusiasts and 'caravan'-based visitors; • The fun park should perhaps be linked to a small and compact skills area; • Any future network of trails developed in the longer term by enthusiasts and volunteers should be aimed at the novice and intermediate market; • It is quite possible however that the forest is not the best location in the town for these mountain bike facilities – liaise with community and owners etc for suitable development site / potential. 	<table border="1"> <thead> <tr> <th colspan="2">INDICATIVE TRAIL DEVELOPMENT COSTS (BUILT TRAIL LENGTH)</th> <th>£</th> </tr> </thead> <tbody> <tr> <td>Fun park build in association with community</td> <td></td> <td>10,000</td> </tr> <tr> <td>Skills area build in association with community</td> <td></td> <td>10,000</td> </tr> <tr> <td>Total Cost</td> <td></td> <td>£20,000</td> </tr> </tbody> </table>	INDICATIVE TRAIL DEVELOPMENT COSTS (BUILT TRAIL LENGTH)		£	Fun park build in association with community		10,000	Skills area build in association with community		10,000	Total Cost		£20,000																
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A4 ESTIMATE OF TRAIL USAGE – COWAL AND TROSSACHS FORESTS

A4.1 Introduction

In this section we have quantified likely trail usage numbers / patterns for each individual forest recommended for mountain bike single track / purpose-built development in Cowal and Trossachs.

As part of our method of calculation, the consultants have quantified the size of the local resident population within a one-hour drive time of the key population centres in Scotland (see Section 6). From this, a calculation of the people who actively participate in mountain biking as a sport and the potential number of mountain bike trips a year generated by local residents have been estimated. This has been used as a cross-check to enable us to verify our projections.

At this time the consultants have only developed a cross-check model for Central Scotland local resident population. This covers cycle developments at: Glentress, Carron Valley, Blairadam, Queen Elizabeth Forest Park, Ardgartan, and Craigvinean Forests. It is estimated by TRC that the total local resident trips to these forests only equates to about 22% of all the mountain bike trips generated by the Central Scotland local resident population. In our opinion our quantification for individual forests by local Central Belt visitors is realistic.

Research has revealed that cycle routes which are located close to a person's residence ie a local centre will be used much more often (many more repeat visits) than those located further away. Visits to national and regional centres will also occur, but as more organised or formal cycle trips across the year. These types of issues have all been considered and factored into our penetration rate analysis detailed in the following section.

What must be borne in mind is that each regional centre will also be a local centre for some of the local resident market, although in general, day visitors will be prepared to travel up to about two hours to visit an attraction / carry out a recreation activity and even more if the attraction is unique (one of a kind ie see Glentress experience). We believe it is more prudent as more purpose-built single track cycle venues are developed across Scotland that each is assessed on its ability to attract a local population or tourist market from only a one-hour drive time. This will avoid and limit the issue of market overlap and displacement. The number of potential visitors to each forest site has therefore been quantified on this basis.

A4.2 The Penetration Criteria

As part of our isochrone analysis methodology TRC consultants have applied a penetration percentage to each individual forest site, based on its likelihood / potential market share. The penetration model has been applied to local resident, day visitor and both UK and overseas overnight tourist markets.

Every tourist or leisure facility, whether it be a swimming pool, cinema or visitor attraction penetrates its market to a greater or lesser degree. The level of penetration applied will depend upon a whole host of tangible differences / variances re quality of attraction, reputation of attraction, facilities offered by attraction etc. In other words an established / quality product will penetrate its market potentially much more than a similar product with more limited market appeal. Indeed, in mountain biking terms, Glentress has a high penetration level for the day visitor markets and this is a direct result of its 'fit' with the markets demands / requirements ie product quality, scale of development, access, brand, proximity to Edinburgh and the North of England markets, and central facilities (ie the Hub, now with separate brand 'the Hub in the Forest'). It is these positive factors which give Glentress such a high penetration rate / share of the day visitor market.

A breakdown of the penetration 'influences' used to calculate trail usage patterns are detailed overleaf.

PENETRATION RATE – ‘INFLUENCES’	
Type	Description
Destination	- Overall strength as a visitor / tourist destination, level of appeal / impression / reputation, etc;
Captive Market	- Loci, level of competition in area, level of difficulty in attracting market, distance to next venue, degree of other / linked recreation experiences in the area;
Tourism Infrastructure	- The cluster effect ie level of wider market offering – tourism / recreation, services facilities re accommodation, brand etc holistic / interlinked v fragmented;
Transport / Access	- Level of supporting transport infrastructure / appeal as an access destination ie easy access v remote. Public transport links;
Linkages	- Links to other tourism / service facilities in the wider area re food and drink / accommodation, visitor attractions, activity provisions etc;
Day / Half-Day Experience	- Value / length of stay / other facilities, linkages to other similar facilities / critical mass opportunities / synergy;
Distance From Market	- Loci / transport / convenience / population catchment, access to markets;
Urban and Rural	- Appeal / remoteness / attractiveness, access;
Overnight Potential	- Economic impact – high / low level benefits;
Accommodation Potential	- Product quality, offering, suitability, price;
Product	- Scale, size, quality / differentiation / appeal / range of developments;
Market	- Scale, size, shape, dynamics;
Skill Level of Market	- Requirements / linkages / facilities;
Breadth of Market	- Appeal / number of different target markets / growth opportunity, niche v mass market;
Inclusive Not Exclusive	- Social / community / health / wider impacts / benefits.

Note: Each individual forest has been evaluated against these penetration influences on the basis re level of positive or negative impact. These criteria were then used to set the penetration rates for each forest area calculated.

A4.3 The Range of Penetration Rates

The table below highlights the range of penetration rates used in our examination of key forests.

A range of penetration rates for day visitors, UK visitors and overseas visitors is provided. Levels of repeat visits for the day visitor market are based on the length, type, scale, quality of product provisions on offer to the local market and is related to local market population, active bike club participants, local enthusiasts, community aspirations, etc, as well as the above ‘penetration criteria’. For overnight visitors, we have assumed no opportunity for repeat visits ie one visit per overnight tourist.

PENETRATION RATE RANGE USED			
Market Type	Low	High	Repeat Visit Times
Day Visitor Penetration Rates	5%	50%	1.5 to 4
UK Overnight Penetration Rates	4%	40%	None
Overseas Penetration Rates	1%	10%	None

Note: These ranges are indicative and should not be attributed to solely one forest site under investigation

A4.4 Basis of Calculation – Cowal and Trossachs Forest District

Local Resident Market

For the Cowal and Trossachs Forests, population isochrones have been drawn and the size of local population catchment quantified, at drive time intervals of 0-1 hour and 1-2 hours as follows:

ESTIMATED SIZE OF LOCAL RESIDENT CATCHMENT		
Cycle Forest	0-1 Hour	1-2 Hours
Queen Elizabeth Forest Park	2,354,002	4,030,048
Ardgartan	966,713	3,567,718
Dunoon	544,826	3,390,900
Glenbranter	35,004	2,634,172

In order to minimise market duplication, minimise displacement and in conjunction with previous TRC forest cycling studies, only the one-hour local resident catchment population has been used in the further calculations in this study.

As outlined in previous studies (and noted in earlier sections of this report), TRC have assumed that on average 6% of the UK population actively participate in mountain biking as a sport (based on Sports Marketing Survey’s data). By applying this to the local resident market catchments, the number of people who actively participate in mountain biking in Cowal and Trossachs has been quantified.

As is widely known, there is no up-to-date market data on the number of people cycling in the UK. Cycle ownership in the UK is still increasing but there is no evidence to actually support a growth in ‘off-road’ mountain biking. However, the consultants believe that the development and promotion of a sustainable trail networks combined with the Land Reform Act (re new access legislation), the development of high quality purpose-built single track cycle centres across Scotland, new cycle products and brands: the health agenda etc cannot fail to grow the overall market or at least make Scotland / Cycle Scotland a more popular destination for ‘off-road’ cycling for both local residents and visitors. As a result we have presented a low and high range by flexing the number of residents who may cycle in the future.

NUMBER OF LOCAL RESIDENTS WHO PARTICIPATE IN MOUNTAIN BIKING WITHIN A ONE-HOUR DRIVE TIME					
	Local Population 0-1 Hour	Static % Participation (Low)	Number of Mountain Bikers	Growth % Participation (High)	Number of Mountain Bikers
Queen Elizabeth Forest Park	2,354,002	6%	141,240	6.5%	153,010
Ardgartan	966,713	6%	58,003	6.5%	62,836
Dunoon	544,826	6%	32,690	6.5%	35,414
Glenbranter	35,004	6%	2,100	6.5%	2,275

These active mountain bikers would then be penetrated and attracted to each purpose-built single track forest cycling development. The level of penetration depends on the type, style and range of facilities and the strategic positioning of each centre – as mentioned previously. The local resident market living within the one-hour drive time will be inclined to make multiple visits to the cycle venue.

Tourist Visitors

In TRC's and EKOS' previous analysis of the national mountain bike site at Glentress as part of the evaluation study, it was identified that 25% of the mountain bike market stayed overnight ie they were overnight tourist visitors with many visiting from England.

TRC have estimated the number of tourist trips within the one-hour drive time catchment isochrone of each forest. (Research has shown that it is very unlikely tourists will travel from their overnight accommodation for more than one hour). These estimates of visitor trips have been based on 2003 United Kingdom Tourism Survey (UKTS) and International Passenger Survey (IPS) data as published on www.scotexchange.net.

The consultants have estimated the proportion of overnight tourists within the isochrone. In 2003, VisitScotland produced a factsheet on cycle tourism in Scotland which demonstrated that 8% of all UK tourists cycle during their trip to Scotland (this includes visitors on both cycling and general holidays). A greater proportion of UK visitors may cycle whilst on holiday to Scotland in the future. To reflect this, a scenario where 10% of people on holiday are assumed to cycle has been prepared. No information is available for overseas tourists, but TRC have assumed a lower level of penetration without future increase, due to the average profile of the overseas visitor to Scotland.

The number of potential 'cycling tourists' within the one-hour drive time isochrone of each forest has been estimated as follows:

UK CYCLE TOURISTS WITHIN THE ONE-HOUR DRIVE TIME					
	(Non-Business) No. of UK Tourist Trips	UK Visitors Who Cycle			
		% (Low)	Number (Low)	% (High)	Number (High)
Queen Elizabeth Forest Park	3,763,690	8%	301,095	10%	376,369
Ardgartan	1,611,800	8%	128,944	10%	161,180
Dunoon	554,200	8%	44,336	10%	55,420
Glenbranter	300,300	8%	24,024	10%	30,030

OVERSEAS CYCLE TOURISTS WITHIN THE ONE-HOUR DRIVE TIME			
	(Non-Business) No. of Overseas Tourist Trips	Overseas Visitors Who Cycle	
		%	Number
Queen Elizabeth Forest Park	519,350	5%	25,968
Ardgartan	208,400	5%	10,420
Dunoon	64,240	5%	3,212
Glenbranter	28,200	5%	1,410

Note: No high range assumed, limited opportunity.

The consultants have then applied a penetration rate to the quantified potential tourist visitor cycle market and outcomes re final trail usage totals are now detailed.

Trail Usage Calculation

In order to assess the level of penetration for the Cowal and Trossachs single track cycle trails, a visitor model has been developed for the national cycle centre at Glentress, based on the findings from the visitor survey as part of the 7stanes evaluation and the estimated 150,000 visitors at Glentress as follows:

COMPARATIVE PENETRATION MODEL – GLENTRESS						
Day Visitors	Catchment Population	% Who Mountain Bike	Penetration Rate %	No. of Multiple Visits	No. of Users	%
0-1 Hour	1,229,600	6%	40%	2.5	73,776	48%
1-2 Hours	3,246,657	6%	20%	1.0	38,960	26%
Overnight Visitors	Visitor Trips	% Who Cycle	Penetration Rate %	No. of Multiple Visits	No. of Users	%
UK Tourists	3,999,200	8%	12%	1.0	38,392	25%
Overseas Tourists	820,310	5%	3%	1.0	1,229	1%
Total					152,358	100%

The above model demonstrates that Glentress attracts approximately 150,000 cycle visitors and approximately 75% of the visitors are day visitors and 25% overnight visitors. This reflects the results of the visitor survey carried out as part of the evaluation process. The penetrations for Glentress are high, demonstrating icon status of this national cycle attraction (ie see penetration criteria 'fit'). For regional and local facilities, the penetration levels would be less. Local community facilities (Type A and B) will generate a higher proportion of repeat visits amongst the one-hour drive time market, particularly if the facility has been built by community volunteers / local bike clubs ie Type A local facilities.

Consultants now detail below a breakdown of the penetration rates for the Cowal and Trossachs Forests based on our earlier penetration criteria.

PENETRATION MODEL						
	Local Residents Day Visitors			Overnight Tourist Visitors		
	Drive Time	Penetration Rate %	Multiple Visits	Tourists	Penetration Rate %	Multiple Visits
Queen Elizabeth Forest Park	0-1 Hour	35%	2.5	UK	12%	1.0
				Overseas	3%	1.0
Ardgartan	0-1 Hour	8%	1.5	UK	8%	1.0
				Overseas	3%	1.0
Dunoon	0-1 Hour	5%	4.0	UK	4%	1.0
				Overseas	2%	1.0
Glenbranter	0-1 Hour	15%	1.5	UK	15%	1.0
				Overseas	3%	1.0

Based on the above assumptions and comparisons, a detailed visitor usage model has been prepared for each forest centre under two scenarios low and high usage. The purpose of this range is to provide FCS with an indicative trail usage scenario. This usage assumes that the product development recommendations for each forest have been executed.

The estimated number of cycle users and the demand breakdown per forest is summarised below.

NUMBER OF TRAIL USERS – LOW					
	Day Visitors		Overnight Visitors		Total Visitors
	Number	%	Number	%	
Queen Elizabeth Forest Park	123,585	77%	36,910	23%	160,496
Ardgartan	6,960	40%	10,629	60%	17,588
Dunoon	6,538	78%	1,837	22%	8,376
Glenbranter	473	11%	3,646	88%	4,118

NUMBER OF TRAIL USERS – HIGH					
	Day Visitors		Overnight Visitors		Total Visitors
	Number	%	Number	%	
Queen Elizabeth Forest Park	133,884	75%	45,943	25%	179,827
Ardgartan	7,540	36%	13,207	64%	20,747
Dunoon	7,083	76%	2,281	24%	9,364
Glenbranter	512	10%	4,547	90%	5,059

A breakdown of the overnight visitors has been summarised as follows. Again the tables show trail usage based on today's market data as well as an assumed high-side scenario.

OVERNIGHT VISITOR BREAKDOWN – LOW					
	Number of Overnight Visitors	UK		Overseas	
		Number	%	Number	%
Queen Elizabeth Forest Park	36,910	36,131	98%	779	2%
Ardgartan	10,629	10,316	97%	313	3%
Dunoon	1,838	1,773	97%	64	3%
Glenbranter	3,646	3,604	99%	42	1%

OVERNIGHT VISITOR BREAKDOWN – HIGH					
	Number of Overnight Visitors	UK		Overseas	
		Number	%	Number	%
Queen Elizabeth Forest Park	45,943	45,164	98%	779	2%
Ardgartan	13,207	12,894	98%	313	2%
Dunoon	2,281	2,217	97%	64	3%
Glenbranter	4,547	4,505	99%	42	1%

A4.5 Conclusion

It is estimated that if all developments in the Cowal and Trossachs Forest area were developed and fully operational cycling centres that over 210,000 cycle trips could be generated, it must be stressed that this assumes full development of all the recommended facilities. Of these trips about 137,556 (65%) are forecast to be generated by local residents, the remaining 72,353 (35%) by overnight / short break visitor tourists. Given the sheer scale of numbers, there is no doubting the opportunity for a national centre to be developed in this Forest District.

It is with this in mind, that the consultants therefore recommend that the Trossachs be developed as a national purpose-built cycling centre for Scotland. It should be the showpiece / 'world-class' centre for cycling in the Cowal and Trossachs area, a significant generator of visitors from the outside area, as well becoming an important part in the growth and the product value of Scotland's mountain biking provisions in the future.

Ardgartan should be developed and marketed as a key overnight visitor destination for cycling and will attract over 10,000 (60%) overnight cycle visits. It will complement the Trossachs development as the product will be well differentiated and focused on a challenging / cross-country / 'lung-busting' target market as well as activity operators including military usage.

Dunoon will be positioned as a local centre with a community focus ie 78% of usage will be locally driven. It will generate little in the way of overnight-related usage in the short term although it should satisfy demand for cycling from the existing caravan stock visitors. In the longer term visitor aspirations could evolve through community initiatives to attract a day visitor market.

PART B – LORNE FOREST DISTRICT

B1 ANALYSIS OF PROPOSED FOREST CYCLING IN LORNE FORESTS

In this section we have prepared an analysis of the Lorne Forest District and assessed individual forests on the basis of their potential for future forest cycling development.

In some of the cases under study, development of single track off-road forest cycling has already commenced while in other areas the cycling infrastructure is very limited. For the purposes of this study, each potential loci has been assessed with a market-led rationale and this fits with a key guiding principle of the mountain bike and cycle strategy prepared for the National Forest Estate. This has been prepared irrespective of any cycle developments to date. As part of this analysis, there was consultation amongst key stakeholders and representatives of each forest. TRC consultants prepared a detailed analysis of an individual forest re location, access, sensitivities and strengths and weaknesses etc. We have also identified the strategic positioning, market opportunities and resulting potential wider benefits for each site.

A breakdown of our findings is highlighted overleaf in tabular bullet point format.

LORNE FOREST DISTRICT

Reference Area	Forest Characteristics	Forest Cycling Development History	Strengths	Weaknesses	Existing Forest and Recreation and Wider Tourism Infrastructure Provisions	Wider Benefits	Market Opportunities
Oban Focus							
Fearnoch	<ul style="list-style-type: none"> Fearnoch is easily accessible from the nearby town of Oban along the main A85 and is located just 2 miles outside the village of Taynault; The forest has an ever-changing variety of scenic views, together with ancient / iconic features re old settlements and windmills; The forest currently includes a number of dual-purpose walks and cycling routes. 	<ul style="list-style-type: none"> At present there are 14km of cycle route / loop – although none is single track. The forest includes the Glen Lonan through route, an 8km easy graded loop, and the Fearnoch cycle loop, a 6km moderate graded loop. Both trails leave from the Fearnoch car park; There are new link sections proposed to extend existing loops; The routes are made up from existing forest roads and are multi-purpose ie suitable for walkers. 	<ul style="list-style-type: none"> Good views of Ben Cruachan; Offers views over to Glen Lonan; Fairly flat / undulating terrain; Located just off A85 so good access from Oban; Existing forest road cycle loop and through route. 	<ul style="list-style-type: none"> There is cycle user conflict currently with walkers, albeit cycle visitor numbers are small; No purpose-built single track for cyclists, only forest roads and dual-purpose paths; Forest structure lacks diversity / second generation; The forest entrance is not located near village and no community involvement; Little terrain variation compared with other forests, has variation in parts. 	<ul style="list-style-type: none"> There is one main car park; The main feature is the Caledonian Forest Reserve, a small example of the native forest which once covered the Scottish Highlands. It includes mixed woodland forest and a rich community of birds / mammals / insects; There are two forest trails: the River Nant Walk, a ¼ hour, ¼ mile walk; and the Ant Trail, a 2 hours, 2½ miles trail; Active community interest in woods from Taynault and Fearnoch. 	<ul style="list-style-type: none"> Potential social and health benefits due to closeness to Oban; Potential to improve quality of life to people of Oban – offers an alternative recreational activity ie increase choice; Potential to become a community facility; Possible economic benefits would be seen in Oban re bike hire / sales and in Taynault re food and drink expenditure. 	<ul style="list-style-type: none"> Forest family cycling due to terrain and location; Day visitors; Provide safe and secure activities for walkers and cyclists; Opportunities to link with cycling markets to the North (re Barcaldine) and to the East (re Crianlarich – See National Cycle Network aspirations); For older, young and less able visitors; Recreation resource for overnight visitors to Oban and wider area; Schools / young children; Forest for local / recreation community use; Low level tourist and local use due to population catchment.
Barcaldine	<ul style="list-style-type: none"> The forest is situated in North Argyll, and overlooks the North of Oban, Firth of Lorne, and Mull and Morven. Its located along the coast on the A828 near Benderloch; It is easily accessible from the nearest population centres of Oban and Benderloch; The land is well suited to forestry, with a wide variety of species and of large specimen trees on show in the Benderloch blocks. There are waterfalls and gorges cut by rivers, which are spectacular focal points to the forest; The forest has a variety of forest roads and informal cycle routes and path networks; The strategically positioned Sutherland's car park caters for most vehicle demand. 	<ul style="list-style-type: none"> There are two existing forest cycling trails found at Sutherland's car park. Gleann Dubh longer route is 8 miles and the Gleann Dubh Circular is a shorter 4 miles route; Informal routes are popular with the West Highland Wheelers – venue for their winter league series; The Wheelers are keen to see more investment re linking forest roads and signing of informal cycle tracks; Local enthusiast, Tony Ashward is currently linking routes and fire roads together to form an informal network; Dave Hutchen, Scottish Downhill Association Chairman and North Argyll Cycle Club, plans to develop cross-country trails for local use; The Oban to Fort William Sustrans cycle route will come through FCS land at Sutherland's requiring upgrades and links to be constructed. 	<ul style="list-style-type: none"> Existing local community user group in Benderloch – identified volunteer base; Used by Fort William Wheelers Club; The forest is used for cross-country winter series event; There are two existing forest cycle trails; Maoilean cycle trail has good views and open space; Western area of forest flatter, the Eastern area steep; Reservoir adds interest; Nearby caravan parks using the forest as a recreation asset; The forest has a well developed footpath network. 	<ul style="list-style-type: none"> B845 dissects the forest into two distinct areas; Some steep terrain between forest roads in Gleann Dubh; Forest diversity Gleann Dubh area rather limited – Green Tunnel effect to existing roads; Cycle conflicts with walkers and other users – re orienteering; Currently signage is not good; Existing informal trails believed to be causing safety issues; Volunteer trail development is very steep not accessible to main market; Potential ownership and user conflict, cycling over dam wall and not sustainable. 	<ul style="list-style-type: none"> The Sutherland's area of Barcaldine Forest offers a range of woodland facilities including walking, cycling, camping, picnic facilities as well as waymarked trails; There are four waymarked walking routes on offer, each of varying size and grading. There is the Blue Trail, Yellow Trail, Red Trail and Fisherman's Walk; The area offers a diverse landscape of picturesque scenery, gigantic fir trees, crashing waterfalls and ancient oak wood. 	<ul style="list-style-type: none"> It is important to the local cycling fraternity that a development takes place. Many have aspirations for Barcaldine and see it as a venue for single track mountain biking; Economic gains re more competitions / events; Barcaldine is already a recognised cycling destination for Southern Lochaber; Cycle developments would offer good social and health opportunities for the small community of Benderloch and Oban communities as well as bike club members. 	<ul style="list-style-type: none"> Fits with local bike club aspirations; Caravan park / overnight tourists ie close proximity to recreation resources; Give something to local community ie community level market Club level events / competitions; Cross-country options; Potentially a low level of visitor usage; Local community-driven development; Short excursions, club night riders; See Scottish Downhill Association re Downhill aspirations at national level.

LORNE FOREST DISTRICT

Reference Area	Forest Characteristics	Forest Cycling Development History	Strengths	Weaknesses	Existing Forest and Recreation and Wider Tourism Infrastructure Provisions	Wider Benefits	Market Opportunities
Glencoe Focus							
Glen Duror	<ul style="list-style-type: none"> Glen Duror Forest is located below the towering Beinn a' Bheithir, just off the main A828 access road and through the village of Duror; The forest has magnificent vantage points, and various sites of historical and cultural importance; Vast forest with good scenic views – has potential to become part of a Cross-Country Epic cycle destination. 	<ul style="list-style-type: none"> Existing forest roads are popular with the West Highland Wheelers Club. It was a new venue for their winter league series in 2004 (55 cyclists attended). Local FCS helped to provide the temporary provisions for the riders ie markings / route signage; At present no single track cycling has been developed; Cycling is informal on existing forest roads. 	<ul style="list-style-type: none"> Dramatic high mountain peaks surround forest; Possible through route linking to mountain path and Brecklett Forest; Good view from North-East area of forest; Utilised by Fort William Wheelers and other local cycle groups; Smooth forest roads recently re-graded. 	<ul style="list-style-type: none"> Long narrow glen very inward looking; Forest structure rather dull and uninteresting; Few roads South side of forest; Rather enclosed glen; No additional points of interest in glen. 	<ul style="list-style-type: none"> Forest car park located approximately 1 mile from Duror village; Forest is suitable for camping and all forest roads are walking and cycling friendly. 	<ul style="list-style-type: none"> Direct economic spend in the village of Glen Duror; Meet the aspirations of the local bike clubs; Opportunities to link with other forests in Glencoe promoting Glencoe as a cycling destination; Forest used for competitions; Greater economic impact and overnight stays are traditionally more common with events. 	<ul style="list-style-type: none"> Maximise local / regional club demand for forest road trails in Southern Lochaber; Summer / evening rides; Satisfy Epic market re through route from Brecklett (see prioritisation) to Glencoe ie possible National Cycle Network circular Epic route utilising forest roads, tourist long-distance Epic rides; Grow the number of local club event / competition opportunities.
Glenachulish	<ul style="list-style-type: none"> Glenachulish is a natural and pleasant forest setting. It is set within the horseshoe of the Beinn a Bheithir massif, one of the most popular mountains in Scotland; The forest / car park is itself located just off the A828 and is close to the village of Glenachulish. 	<ul style="list-style-type: none"> At present there are two forest cycling trails on offer; The Glenachulish circular route is a 4 miles loop with steep climbs. This allows cyclists to explore the Glenachulish basin; The through route to St Johns is an East to West, 2 miles, easy graded route giving spectacular views; There are at present no single track cycling provisions in the forest, but the high level forest roads present the cyclist with a challenge. 	<ul style="list-style-type: none"> Fantastic views, particularly in Eastern sections to Glencoe, Kinlochleven and Ballachulish; Good links to Ballachulish village; Part of strategic Fort William, Oban route; Two signed cycle routes go through forest. 	<ul style="list-style-type: none"> Rather steep ascent to high level route; Circular route to maximise views need to utilise footpath along A82; No single track routes; Steep sided 'U' shaped valley. 	<ul style="list-style-type: none"> On offer is a small informal car park, which gives locals and visitors alike, access to cycle routes and for walkers an opportunity to wander on forest roads or gain access to the Munros above the forests; Close links to Allan Breck (the Appin Murder Cairn) where a new car park development offers picnic, walking and interpretation opportunity. 	<ul style="list-style-type: none"> Provides a facility to the local cycling enthusiast, where local / social community benefits are already visible; Becoming part of a larger Epic route where expected economic benefit would be high ie overnight demand; Enhance the potential / build the credentials of the Glencoe area – as a future cycling destination in Scotland; Help to improve Lochaber's Outdoor Capital credentials; Growing cycling use in the forest will help to better market the area and increase awareness within specific biking markets ie magazines, chat rooms and media publications; More cycling will encourage visitors to stay in Lochaber longer, boosting economic spend. 	<ul style="list-style-type: none"> Intermediate cross-country cycling opportunities ie terrain is too steep for families; Satisfy / link with Epic circular route market; 'Lung-busting' route for local fitness market.

LORNE FOREST DISTRICT

Reference Area	Forest Characteristics	Forest Cycling Development History	Strengths	Weaknesses	Existing Forest and Recreation and Wider Tourism Infrastructure Provisions	Wider Benefits	Market Opportunities
Glencoe Focus							
Brecklett	<ul style="list-style-type: none"> Brecklett Forest is a 'virgin' forest with no internal forest infrastructure / road network; Access to the forest is from the Southern edge of Ballachulish village – adjacent to school and church and from behind the Glencoe Visitor Centre on the A82; Local community groups are all working as one, pulling together will help to attract more activity tourists to develop more access and low level walking / cycling facilities in the area; The forest is extremely dense in places and mainly Sitka Spruce; A forest road is due to be built in 2005 / 2006 to begin forest extraction which commences in blocks from 2006. 	<ul style="list-style-type: none"> Virgin forest – no internal forest infrastructure; Proposed Glencoe orbital recreational track 9km in length in and around the village of Glencoe – track will be suitable for all recreation including cycling. Only a minor part of this development is on FCS Estate land; Community aspirations for strategic cycling links re with Duror, West Highland Way and a network of single track trails along the length of Glencoe; Glencoe Visitor Centre owned by National Trust is main forest access point; NTS very keen partners to develop access point trails and parking in partnership with FCS. 	<ul style="list-style-type: none"> Existing visitor volumes are 180,000 at Glencoe visitor centre; High volume of passing visitor traffic along the A82; Very active community council supportive of positioning activity; Enthusiastic community group established; Possibility of young volunteers for trail building; Existing tourism infrastructure re car parks, toilets, café; Real partnership possibilities exist in Glencoe; Virgin forest, new forest road will open up possibilities; Fantastic views, all 360° aspects if height can be gained; Local kids previously built jump park in forest; The linking of three communities is possibly via forest roads; Develop in partnership with National Trust low level path network and viewpoints; Strategic link with community aspirations for long-distance routes; Link to proposed Glencoe footpath development and links to West Highland Way. 	<ul style="list-style-type: none"> Single forest road felling track in short term; Conflicts with walkers ie already a well-known walking destination but Glencoe is not renowned for cycling; Fairly intensive felling activity in the forest over the next five to 10 years; Existing quad track route too steep; Single forest species rather boring / 'dark tunnel' feel views will have to be opened; Gradient terrain rather steep in places; Some streams are gorge like and may have to be bridged increasing potential development cost; The Glencoe area has an older than average population base. 	<ul style="list-style-type: none"> Virgin forest – no internal forest infrastructure re car parks, service facilities, cycle paths, walking routes etc; Hope to link all three villages with a cycle / path network in future; Links to Glencoe and possibly West Highland Way; Offers recreational link opportunities. 	<ul style="list-style-type: none"> Wider economic benefit potentially at a regional level due to the larger tourism opportunity for Glencoe as a cycling / walking sightseeing destination; Overnight visitor destination benefits; Limited social and health benefits due to distance from large-scale resident population; Opportunity to link with other activity products in the area to create destination product – see Lochaber Outdoor Capital of UK; The cycling product is seen as a catalyst to develop but also to capitalise on the popular and growing Glencoe visitor activity product; The cycle product will offer direct benefits to the local village of Glencoe – spreading economic benefit and helping generate local business in the area while satisfying local community aspirations. 	<ul style="list-style-type: none"> Regional tourist market potential linked to destination Lochaber; Community-led tourist development; Day visitor and overnight tourist markets re critical mass of Lochaber; Complement Witch's Trail and Wolfrax product to maximise overnight stay visitor market; Fill market gap re longer cross-country routes; Local markets social / educational and recreational; Epic / cross-county cycle market; Local caravan parks / accommodation sector; Opportunity to strengthen Lochaber Outdoor Capital credentials; Promote fun and skills facility for local and visitor youth; Link with NTS Glencoe Visitor Centre.

LORNE FOREST DISTRICT

Reference Area	Forest Characteristics	Forest Cycling Development History	Strengths	Weaknesses	Existing Forest and Recreation and Wider Tourism Infrastructure Provisions	Wider Benefits	Market Opportunities
Glencoe Focus							
Glencoe Lochan	<ul style="list-style-type: none"> The forest is located off the A82, through Glencoe village and over the River Coe bridge behind the local hospital; The forest was planted in the 19th century and has a Lochan nesting in the centre of the woods; The diversity of the woodland is good and it has a good setting. 	<ul style="list-style-type: none"> Very small forest area, as yet no forest trails / routes developed or mapped; The forest is well used by local people – dog walkers, families etc. 	<ul style="list-style-type: none"> Good views; Loch picturesque; Possibility to link paths as through cycle and walking route; More diverse forest / broad woods. 	<ul style="list-style-type: none"> Considerable visitor pressure area from low level walks around loch; Very small forest area; Little development expansion possibilities. 	<ul style="list-style-type: none"> The main focus is the large easily accessible Glencoe Lochan car park. It offers easy access to forest roads / trails and fishing; The Lochan is stocked with rainbow trout; There are three forest walks including the Woodland Walk, a 1 hour, 1½ miles trail, offering breathtaking views of Loch Leven; and the Lochan Walk, a ¼ hour, 1 mile trail which includes wheelchair access; and the Mountain Walk a 1 hour, 1½ miles route offering panoramic views of the Stac a' Chlamhain. 	<ul style="list-style-type: none"> As no opportunities were identified, consultants assume direct cycling impacts to be minimal. 	<ul style="list-style-type: none"> Actively discourage serious cycling markets; Perhaps opportunities to link forest as through route to other areas re Kinlochleven, West Highland Way etc; Long-distance cross-country cycle market; An all ability multi-user trail linked to Brecklett may be a possible. Liaise with community, not FCS-driven initiative.
Bridge of Orchy Focus							
Bridge of Orchy and Glen Lochy	<ul style="list-style-type: none"> The forests are located off the A85, 2 miles East of Dalmailly and Bridge of Orchy on the A82; The forests of Orchy and Lochy offer opportunities for recreational / outdoor activities; There are nature trails, two remnants of the Caledonian Pine Forest, views to Ben Cruachan and the West Highland Way passes through a corner of the forest. 	<ul style="list-style-type: none"> A 12 miles steep up and down cycle route is on show at Glen Orchy. It provides some exciting mountain bike riding through the woods on the West side, with a return along the single track road that runs through the glen beside the River Orchy; The Glen Orchy cycle route has links to the West Highland Way which can be cycled further North; As yet there have been no purpose-built mountain bike trails developed. 	<ul style="list-style-type: none"> River Orchy very attractive river setting; River already well used by activity tourists, fishing, kayaking and river rafting etc; Outdoor activity providers utilise Glen Orchy. The clients to Glen Orchy are primarily for paddle sports; There is already an established mountain bike trail along Glen Orchy. It is an out and back route or a loop using the public road; The Glen Orchy track links to the West Highland Way at Bridge of Orchy which can be cycled North of Crianlarich; Possibility of future links to long-distance National Cycle Network Sustrans route, and an extension of Route 7 from Killin; Recent footpath improvements due to mountain access scheme to three 'corbetts' surrounding area; Refreshments / accommodation at Glen Orchy Hotel. 	<ul style="list-style-type: none"> Forest structure rather uninteresting mainly Sitka Spruce; Existing mountain bike track along glen is away from river and has few views in single track section; There is very limited car parking along route; The single track B8074 road which offers a circular loop in Glen Orchy is rather dangerous for families and groups due to blind spots and sharp beds; The existing 12km route leads from car park to car park, two cars are required. 	<ul style="list-style-type: none"> Two walking routes leaving from the Strone Hill car park include the Red Trail a short ¼ hour, ½ mile trail which circles some of the area's best known oak, and the Green Trail a ½ hour, 1 mile trail through some rather impressive oak trees; Popular water-based activities / sports are undertaken in Glen Orchy including rafting, kayaking and fishing; New mountain access route re car park at Glen Orchy and one at Bridge of Orchy. 	<ul style="list-style-type: none"> Fewer wider benefits foreseen. 	<ul style="list-style-type: none"> Little opportunity for major single track cycle development; Out and back, through route only if links can be establishment and sustained ie National Cycle Network.

LORNE FOREST DISTRICT

Reference Area	Forest Characteristics	Forest Cycling Development History	Strengths	Weaknesses	Existing Forest and Recreation and Wider Tourism Infrastructure Provisions	Wider Benefits	Market Opportunities
Bridge of Orchy Focus							
Strathfillan and Glen Dochart	<ul style="list-style-type: none"> These forest areas are located just off the A82 at Crianlarich; FCS have been working closely with the local communities of Tyndrum and Crianlarich and the Strathfillan Community Development Trust to provide walking access through the forest from these Highland gateway villages. 	<ul style="list-style-type: none"> Existing West Highland Way route North of Crianlarich is able to be ridden by bike; There is also a short existing route developed and waymarked at Tyndrum; Plans to extend National Cycle Network Sustrans Route 7 in the future will be considered. 	<ul style="list-style-type: none"> West Highland Way passes through this area and can be cycled upon; A youth hostel is located in Crianlarich; There is a community woodland area run by Tyndrum Community Woodland Group part of Strathfillan Community Development Trust; The Strathfillan community has great enthusiasm for the outdoor visitor market; The villages are service stops on the busy A82; The area offers a range of accommodation from campsite to 3 Star hotels; The area is within Loch Lomond and the Trossachs National Park; There is a triangular route from Tyndrum up the River Cononish utilising Land Rover tracks and the West Highland Way; A long-distance cycle route extension to National Cycle Network Sustrans Route 7 is planned; Good public transport infrastructure; A good variety of views. 	<ul style="list-style-type: none"> Walker pressures / cycle conflicts with West Highland Way users; Limited existing forest road network; Limited circular route possibilities; Single through route only; Southern forests in area are on very steep terrain may be costly to build through route; Limited cycle development options other than through route or short community type forest cycle loops. 	<ul style="list-style-type: none"> The Crianlarich Community Woodland via local partners, has created a circular forest walk through an infant native woodland; Within the surrounding area there is the West Highland Way, 14 Munros and the area lies within Loch Lomond and the Trossachs National Park – so there is lots to see and do; The settlements are seen as service centres (Crianlarich and Tyndrum) for the A82 rather than a tourist destination in their own right. 	<ul style="list-style-type: none"> Within 100 yards of the forest is Crianlarich. The local businesses can gain from any cycling / recreational facility developed; Cycle developments will offer social and health opportunities for the small number of youths / families and local community; The overnight accommodation supply / tourist infrastructure will help to boost wider economic benefits re overnight users, particularly if long-distance cycle routes can be developed. 	<ul style="list-style-type: none"> Encourage Strathfillan Community Development Group to take a lead role in the future long-distance trail mountain biking opportunity; Appease walker conflicts re West Highland Way by satisfying cyclists needs; Sign River Cononish loop for children / older cyclists; Consider cycle loop development around Crianlarich, link to proposed community footpath network extension for local enthusiasts and day / overnight visitor markets / long-distance cyclists; Work with community and create all ability trails re outdoor activity market; Opportunity for National Cycle Network link from Killin to utilise forests. Liaise with Sustrans.

B2 STRATEGIC POSITIONING AND TARGET MARKETS – LORNE FORESTS

B2.1 Introduction

Continuing on from the review and appraisal of each forest area as detailed in Section B1, the consultants now present a summary of the recommended strategic positioning and target markets for each forest cycling loci currently under consideration in Lorne.

B2.2 Strategic Positioning

The strategic positioning of a future purpose-built centre in Lorne has been considered against the development criteria as outlined in Section 5 of this report. The strategic positioning reflects an indication of the market potential, likely level of economic benefit re local, regional and national impacts, and the scale of product development, links to infrastructure and wider tourism destinations. The consultants' positioning conclusions for each forest within the district are provided as follows:

LORNE FOREST DISTRICT – STRATEGIC MARKET AND PRODUCT POSITIONING

	Local Centre			Regional Centre	National Centre	Cycle Through Route	Conclusion on Positioning Opportunity
	Type A Volunteer Enthusiasts	Type B Wider Access / Inclusion For All	Type C Tourism				
Oban Focus							
Fearnoch	<ul style="list-style-type: none"> Currently not developed – no volunteers, groups evident. 	<ul style="list-style-type: none"> Very accessible to all Oban; Good social inclusion opportunity; Good day visitor destination appeal; Family market. 	<ul style="list-style-type: none"> Access to Oban existing tourists and VFRs not new markets; Visitor focus; Linking with other visitor attractions in area. 	<ul style="list-style-type: none"> No regional possibilities; Small market catchment although Oban has tourism destination credentials. 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Forest may play a longer-term role in through route links to Tyndrum if route is identified. 	<ul style="list-style-type: none"> Local facility Type C and B.
Barcaldine	<ul style="list-style-type: none"> Local bike club aspiration ie downhill and cross-country trail network; Events and competitions ongoing; Popular 'market pool' for day visitors ie Fort William and North Argyll mountain bike clubs; Short local excursion venue. 	<ul style="list-style-type: none"> Accessible to all in Oban / Fort William; Visited by local community market; Forest recreation management issues; Walker conflict issues. 	<ul style="list-style-type: none"> Tourism spin-off from downhill series events and mountain bike club weekend participation; Building cycling destination profile; Some limited overnight visitor market re downhill. 	<ul style="list-style-type: none"> Some potential regional opportunity due to rich nature of product development. 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Part of longer-term through routes between Oban and Fort William possible (see National Cycle Network links). 	<ul style="list-style-type: none"> Local facility Type A (with some potential tourism event focus); Key strategic ie link possibility tourism potential linked to community downhill.
Glencoe Focus							
Glen Duror	<ul style="list-style-type: none"> Events and competitions ongoing; Strong local bike club activity / influence; Well-known Southern Lochaber cycling destination; Community aspirations; Need to widen market base. 	<ul style="list-style-type: none"> Few social inclusion opportunities due to access, terrain; The nature of the forest limits opportunity re product and market development potential. 	<ul style="list-style-type: none"> Benefits from through routes and Epic trails. 	<ul style="list-style-type: none"> Some regional opportunity if linked re Glenachulish / Brecklett. 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Links with Brecklett would offer attractive Epic opportunity; Links to Oban / Fort William National Cycle Network aspirations. 	<ul style="list-style-type: none"> Local facility Type A (with tourism event focus) and strategic links and through route possibilities.
Glenachulish	<ul style="list-style-type: none"> Not developed – no volunteers. 	<ul style="list-style-type: none"> Accessible to all including walkers, cyclists and all other tourist recreation activity users but rather steep terrain. 	<ul style="list-style-type: none"> Very picturesque destination / good views; Create overnight visitor market excursion tourists; Tourism potential due to wide market appeal; Create links to Brecklett; Family tourism route. 	<ul style="list-style-type: none"> Some regional opportunity with possible links to Brecklett forming network of regional trails; Part of a Glencoe focus. 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Identified Sustrans through route opportunity; Part of possible Oban to Fort William cycle development. 	<ul style="list-style-type: none"> Local facility Type C with cycle through route links.

LORNE FOREST DISTRICT – STRATEGIC MARKET AND PRODUCT POSITIONING

	Local Centre			Regional Centre	National Centre	Cycle Through Route	Conclusion on Positioning Opportunity
	Type A Volunteer Enthusiasts	Type B Wider Access / Inclusion For All	Type C Tourism				
Glencoe Focus							
Brecklett	<ul style="list-style-type: none"> • Very strong local / community support for cycling developments both youth and wider community; • A blueprint for volunteer partnership potential and workings together. 	<ul style="list-style-type: none"> • Need to develop and ensure access for all is achieved; • Virgin forest – development constraints re logistics, costs and timing. 	<ul style="list-style-type: none"> • High visitor population develop links to key visitor centre; • Suitable tourism infrastructure / services in place; • Possible ski centre / downhill development linkages; • Glencoe has 'outdoor' destination appeal; • Create significant overnight visitor market. 	<ul style="list-style-type: none"> • Regional aspirations to create Glencoe focus due to wide market appeal and local community support; • Opportunity to link with Witch's and Wolfrax offerings in Lochaber re destination Lochaber focus; • Unique product offering; • Good links to West Central Scotland catchment areas; • Complete Lochaber product. 	<ul style="list-style-type: none"> • N/A 	<ul style="list-style-type: none"> • Possible links to Glencoe Lochan and Glenachulish, through route to Oban; • Part of Epic route. 	<ul style="list-style-type: none"> • Type A and C with possible regional potential re tourism cycling destination ie cycle Lochaber; • Wider links eventually; • Links to network cycle product essential; • Links to Glencoe path network and West Highland Way aspirational.
Glencoe Lochan	<ul style="list-style-type: none"> • No local volunteer base; • Local community group promote walks in the forest. 	<ul style="list-style-type: none"> • Possibly limited cycle development opportunity; • Small-scale community school youth opportunities. 	<ul style="list-style-type: none"> • No tourist visitor potential – Brecklett will be the focus. However other links could / will be formed. 	<ul style="list-style-type: none"> • N/A 	<ul style="list-style-type: none"> • N/A 	<ul style="list-style-type: none"> • N/A 	<ul style="list-style-type: none"> • Local facility Type A.
Bridge of Orchy Focus							
Bridge of Orchy and Glen Lochy	<ul style="list-style-type: none"> • No volunteer base. 	<ul style="list-style-type: none"> • Longer-term through route access; • Opportunities for Epic forest cycling. 	<ul style="list-style-type: none"> • Through route – visitor market opportunity only. 	<ul style="list-style-type: none"> • N/A 	<ul style="list-style-type: none"> • N/A 	<ul style="list-style-type: none"> • Long-term through route / linkage possibilities. 	<ul style="list-style-type: none"> • Through route cycling links.
Strathfillan and Glen Dochart	<ul style="list-style-type: none"> • No volunteer base. 	<ul style="list-style-type: none"> • Small-scale community school youth opportunities; • Create social inclusion linkages and partnership. 	<ul style="list-style-type: none"> • Limited tourist potential – although spin-offs from longer / Epic through routes will have a positive bearing. 	<ul style="list-style-type: none"> • N/A 	<ul style="list-style-type: none"> • N/A 	<ul style="list-style-type: none"> • Through route linkage opportunities with the West Highland Way and links to National Cycle Network Sustrans Route 7 also known at Killin. 	<ul style="list-style-type: none"> • Through route cycling links opportunity for limited development Type A.

Market Fit

Based on the strengths and weaknesses analysis and the general market opportunities identified, together with an understanding of the general terrain and forest structure, the following summary tables of cycling target markets have been prepared.

The cycle target markets adopted are those which have been highlighted and defined in Section 4. The key areas in Lorne Forest District under study have been considered against the relative / potential strengths of the product which could be developed due to the current level of development, terrain, strategic positioning etc.

TARGET MOUNTAIN BIKE MARKET OPPORTUNITIES							
	Families / Schools / Social Inclusion	Novice	Enthusiast	Cross-Country ⁽¹⁾	Downhill	Events	Freeride
Oban Focus							
Fearnoch	✓✓	✓✓	X	X	X	X	X
Barcaldine	X	X	✓✓✓	✓✓	✓	✓✓	✓
Glencoe Focus							
Glen Duror	X	X	✓✓	✓✓	X	✓✓	X
Glenachulish	✓	✓	✓✓	✓✓	X	✓	X
Brecklett	✓✓	✓✓	✓✓✓	✓✓✓	X	✓✓✓	✓
Glencoe Lochan	✓	✓	X	X	X	X	X
Bridge of Orchy Focus							
Bridge of Orchy and Glen Lochy	X	✓	✓	✓✓	X	X	X
Strathfillan and Glen Dochart	X	✓	✓	✓✓	X	X	X

Note: (1) Includes potential for Epic route products.

TARGET MARKET SKILL LEVEL				
	Novice	Intermediate	Advanced	Events
Oban Focus				
Fearnoch	High	Low	Low	-
Barcaldine	-	Medium	High	Club Events
Glencoe Focus				
Glen Duror	-	Medium	Medium	Club Events
Glenachulish	Low	High	Low	Cross-Country Endurance
Brecklett	Medium	High	Low	Cross-Country Endurance
Glencoe Lochan	High	Medium*	-	-
Bridge of Orchy Focus				
Bridge of Orchy and Glen Lochy	-	Low	-	-
Strathfillan and Glen Dochart	Medium	Medium	-	-

Note: * Link route only.

B2.3 Positioning Summary

- The tables above identify the main markets and opportunities within Lorne Forest District. Cross-Country Epics linking Glen Duror and Glenachulish with Brecklett, and family tourist / novice cycling opportunities re a Glencoe focus and longer-term cross-country single track opportunities to help cement Lochaber Outdoor Capital and complement Fort William and Laggan Wolftrax;
- Barcaldine and Glen Duror are frequently used by Lochaber-based mountain bike clubs and they are both venues for winter league competition events. With this type of market, as you would expect, skill levels are higher than average and the focus in the main is at the 'aficionado-end' of the market. These destinations in the future offer a niche-driven product at locally positioned level;
- The villages of Glencoe and the forest of Glenachulish offer some spectacular landscape and views. They also offer longer-term opportunities for all levels of cycling;
- The Bridge of Orchy focus has limited market opportunity. It is not recognised as a mountain biking destination centre, but more a focus for connecting Epic / through route links etc links to future National Cycle Network / West Highland Way aspirations.

B3 PRODUCT DEVELOPMENT AND INDICATIVE TRAIL DEVELOPMENT COSTS – LORNE FORESTS

Based on research findings, strategic positioning and product market fit analysis, the summary of development conclusions are as follows. Please note all indicative trail capital costs outlined exclude design fees and trail development project management costs. These additional costs usually add about 10%-12% to trail development costs.

TRC have estimated potential trail development costs based on benchmark analysis – as highlighted in Section 8. These costs have been presented at 2005 prices.

LORNE FOREST DISTRICT – DEVELOPMENT RECOMMENDATIONS																														
	Product Opportunities	Product Development and Outline Trail Costs																												
Oban Focus																														
Fearnoch	<ul style="list-style-type: none"> • Sign larger forest road loop – see existing routes; • By adding strategic links, create smaller loop (see existing FCS proposals); • Consider providing some forest interpretation for multi-users; • Create short multi-access trail suitable for families and older couple markets; • Manage conflict with walkers; • Develop non-graded forest cycle routes not purpose-built single track mountain bike development – focus is multi-access trails for families and older visitors; • Put in trail control points to manage cyclists / walker conflicts ie slow down cyclists improve sight lines. 	<ul style="list-style-type: none"> • Its focus and positioning is local (Oban), multi-access and family cycling / walking; • Augment existing signed routes – ensure routes are multi-access; • Create small sections of single track to give added attraction and alleviate walking conflicts. <table border="1"> <thead> <tr> <th colspan="4">INDICATIVE TRAIL DEVELOPMENT COSTS</th> </tr> <tr> <th></th> <th>km</th> <th>£ per m</th> <th>£</th> </tr> </thead> <tbody> <tr> <td>Strategic single track</td> <td>2</td> <td>10</td> <td>20,000</td> </tr> <tr> <td>Upgrade existing footpath to all multi-access</td> <td>1</td> <td>10</td> <td>10,000</td> </tr> <tr> <td>Upgrade interpretation on routes</td> <td></td> <td></td> <td>5,000</td> </tr> <tr> <td>Opportunity to create community forest trail working with local schools (see Rosehall Forest, Sutherland Wildwood)</td> <td></td> <td></td> <td>7,500</td> </tr> <tr> <td>Total Development Cost</td> <td></td> <td></td> <td>£42,500</td> </tr> </tbody> </table>	INDICATIVE TRAIL DEVELOPMENT COSTS					km	£ per m	£	Strategic single track	2	10	20,000	Upgrade existing footpath to all multi-access	1	10	10,000	Upgrade interpretation on routes			5,000	Opportunity to create community forest trail working with local schools (see Rosehall Forest, Sutherland Wildwood)			7,500	Total Development Cost			£42,500
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Barcaldine	<ul style="list-style-type: none"> • Local cycle club development products; • Strategically link to Caledonian Mountain Bike Community Project – re management (see TRC Northern Region Strategy); • Trail constructed by local community / bike group under guidance of FCS – see Mountain Bike Community Project; • Health and safety and risk assessment must be carried out; • Lines / routes, informal link trails should be agreed with community and FCS and signed and linked up with forest roads; • Downhill-style route currently being constructed by local group, sign and formalise; • Local / low key / low involvement – not a recognised single track centre under FCS banner; • Possibly part of Oban / Fort William off-road route in longer term; • FCS to actively manage walker / cycle conflicts; • Put in strategic cycle control trail development points to manage cycle speed etc and encourage multi-user route safety. 	<ul style="list-style-type: none"> • Full development cost unknown as community-led project; • Local community labour in kind. <table border="1"> <thead> <tr> <th colspan="4">INDICATIVE TRAIL DEVELOPMENT COSTS</th> </tr> <tr> <th></th> <th>km</th> <th>£ per m</th> <th>£</th> </tr> </thead> <tbody> <tr> <td>Strategic linking of forest roads to form local cross-country-style route</td> <td>4</td> <td>15</td> <td>60,000</td> </tr> <tr> <td>Development of downhill-style route (currently in progress)</td> <td>1</td> <td>10-15</td> <td>10,000-15,000</td> </tr> <tr> <td>Introduction of cycle control points etc on existing multi-user tracks</td> <td></td> <td></td> <td>15,000</td> </tr> <tr> <td>Improved management and signage of existing trail network</td> <td></td> <td></td> <td>5,000</td> </tr> <tr> <td>Total Development Cost</td> <td></td> <td></td> <td>£90,000-£95,000</td> </tr> </tbody> </table>	INDICATIVE TRAIL DEVELOPMENT COSTS					km	£ per m	£	Strategic linking of forest roads to form local cross-country-style route	4	15	60,000	Development of downhill-style route (currently in progress)	1	10-15	10,000-15,000	Introduction of cycle control points etc on existing multi-user tracks			15,000	Improved management and signage of existing trail network			5,000	Total Development Cost			£90,000-£95,000
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Glencoe Focus																														
Glen Duror	<ul style="list-style-type: none"> • Improve signage to create long-distance route linking the four communities of Glencoe, Ballachulish, South Ballachulish and Duror (see Brecklett); • Work with existing landowner to upgrade current footpath as an all ability track for cycling, walking etc. This route needs prioritisation within the bigger development picture. (Note: this needs considerable upgrade as existing footpath is unsustainable and much of it is fall line. A contour trail needs to be built); • Consider adding a small number of strategic single track links to forest roads to create loops; • Strategically position local forest road, re cycling, evening out for local clubs and part of long-distance Epic route; • Link to the aspiration for Oban, Fort William long-distance cycle route; • Strategic links into West Highland Way and Glencoe loop; • The Duror to North Ballachulish strategic link could only really be justified after Brecklett single track centre has been developed. 	<ul style="list-style-type: none"> • Through route only, and forest roads cycling. No single track development advocated in Duror; • Work with existing landowner re Epic route and link to Glencoe; <table border="1"> <thead> <tr> <th colspan="4">INDICATIVE TRAIL DEVELOPMENT COSTS</th> </tr> <tr> <th></th> <th>km or Quantity</th> <th>£ per m or £ per unit</th> <th>£</th> </tr> </thead> <tbody> <tr> <td>Duror to North Ballachulish</td> <td>6</td> <td>50</td> <td>300,000</td> </tr> <tr> <td>Strategic linking of other forest roads</td> <td>1</td> <td>10</td> <td>10,000</td> </tr> <tr> <td>Route signage</td> <td>20</td> <td>30</td> <td>600</td> </tr> <tr> <td>Total Development Cost</td> <td></td> <td></td> <td>£310,600</td> </tr> </tbody> </table>	INDICATIVE TRAIL DEVELOPMENT COSTS					km or Quantity	£ per m or £ per unit	£	Duror to North Ballachulish	6	50	300,000	Strategic linking of other forest roads	1	10	10,000	Route signage	20	30	600	Total Development Cost			£310,600				
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	Product Opportunities	Product Development and Outline Trail Costs																																																																	
Glencoe Focus																																																																			
Glenachulish	<ul style="list-style-type: none"> Maintain existing forest road routes; Promote Glenachulish Epic views and position as part of Epic routes using existing network of forest roads; Work with Sustrans on development of long-distance through route links to Oban / Fort William; No purpose-built single track development proposed in Glenachulish. 	<ul style="list-style-type: none"> No single track proposed. No costs at this stage; New signage recently added to forest road network; Integral part of emerging Epic route. 																																																																	
Brecklett	<ul style="list-style-type: none"> Positioned as a centre to attract visitors and satisfy demands of local community; Medium / longer-term potential as mountain bike development once forest road developed and initial felling phases complete; Positioned as cross-country mountain bike centre / wilderness centre in the 'big country' aimed at intermediate riders; Positioned as showcase for Lochaber Outdoor Capital of UK due to A82 entry point and NTS Glencoe visitor centre; Positioned to complement Witch's and Wolfrax Trails ie long cross-country intermediate market attracting overnight visitors and extending length of stay; Strategic link to and through Glencoe in line with community aspirations; Strategic links to Kinlochleven and West Highland Way via Glencoe Lochan; Linked to possible Oban / Fort William Sustrans route – commitment to drive forward with FCS; Circular Epic route linking Glencoe with Duror (via Coleann an Fhiodh and Ballachulish) loop (see prioritisation); Development of cycle skills loop and 'jump park' promoting the best of Lochaber in association with / links to caravan park, local community youth and NTS; Development would probably partially have to be on NTS land; Development of all abilities trail in partnership with National Trust around Glencoe visitor centre; Development of red level cross-country trail system / network in two phases. Interlinked trail loops to create critical mass of trail product at same skill level, encourage repeat visits / overnight stays (see Coed-y-Brenin Wales); Ensure track link from new forest road can link with Ballachulish re Epic link in future; The potential cycle development should organically grow driven by the community / FCS and NTS – cross-country and freeride jump markets should be tackled first but some critical mass needed to attract visitors. 	<table border="1"> <thead> <tr> <th colspan="4">INDICATIVE TRAIL DEVELOPMENT COSTS</th> </tr> <tr> <th>Phase I</th> <th>km</th> <th>£ per m</th> <th>£</th> </tr> </thead> <tbody> <tr> <td>Development of skills loop (link NTS visitor centre)</td> <td>0.5-1</td> <td>15</td> <td>7,500-15,000</td> </tr> <tr> <td>Development of all ability trail (see NTS)</td> <td>1-2</td> <td>10</td> <td>10,000-20,000</td> </tr> <tr> <td>Development of Jump / Freeride area (must be linked to caravan park)</td> <td></td> <td></td> <td>10,000</td> </tr> <tr> <td>Short sections of strategic single track on future forest road throughout Brecklett</td> <td>2-3</td> <td>10</td> <td>20,000-30,000</td> </tr> <tr> <td>Red grade cross-country single track trail system (see Coed-y-Brenin)</td> <td>10</td> <td>20</td> <td>200,000</td> </tr> <tr> <td colspan="3">Total Phase I Development Cost</td> <td>£247,500-£275,000</td> </tr> <tr> <th>Phase II</th> <th>km</th> <th>£ per m</th> <th>£</th> </tr> <tr> <td>Addition to red grade cross-country single track</td> <td>15</td> <td>20</td> <td>300,000</td> </tr> <tr> <td>Strategic links to long-distance routes from existing forest roads where possible</td> <td></td> <td></td> <td>10,000-15,000</td> </tr> <tr> <td>Develop a successful Phase I and links to Fort William / Oban etc</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="3">Total Phase II Development Cost</td> <td>£310,000-£315,000</td> </tr> <tr> <th>Other Costs</th> <th>Quantity</th> <th>£ per unit</th> <th>£</th> </tr> <tr> <td>Signs</td> <td>100</td> <td>30</td> <td>£3,000</td> </tr> <tr> <td colspan="3">Total Development Cost</td> <td>£560,500-£593,000</td> </tr> </tbody> </table>		INDICATIVE TRAIL DEVELOPMENT COSTS				Phase I	km	£ per m	£	Development of skills loop (link NTS visitor centre)	0.5-1	15	7,500-15,000	Development of all ability trail (see NTS)	1-2	10	10,000-20,000	Development of Jump / Freeride area (must be linked to caravan park)			10,000	Short sections of strategic single track on future forest road throughout Brecklett	2-3	10	20,000-30,000	Red grade cross-country single track trail system (see Coed-y-Brenin)	10	20	200,000	Total Phase I Development Cost			£247,500-£275,000	Phase II	km	£ per m	£	Addition to red grade cross-country single track	15	20	300,000	Strategic links to long-distance routes from existing forest roads where possible			10,000-15,000	Develop a successful Phase I and links to Fort William / Oban etc				Total Phase II Development Cost			£310,000-£315,000	Other Costs	Quantity	£ per unit	£	Signs	100	30	£3,000	Total Development Cost			£560,500-£593,000
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Glencoe Lochan	<ul style="list-style-type: none"> Develop through route trail – upgrade existing paths; Improve paths for multi-access aimed at families / children. 	<ul style="list-style-type: none"> Through route trail improvements; Improvement to path network re multi-access. 																																																																	

LORNE FOREST DISTRICT – DEVELOPMENT RECOMMENDATIONS		
	Product Opportunities	Product Development and Outline Trail Costs
Bridge of Orchy Focus		
Bridge of Orchy and Glen Lochy	<ul style="list-style-type: none"> • Ensure existing route remains open ie minimal maintenance required. 	<ul style="list-style-type: none"> • Not part of purpose-built development / upgraded through route only; • Only ongoing maintenance costs to keep route open.
Strathfillan and Glen Dochart	<ul style="list-style-type: none"> • Work with Sustrans to establish route and partnership fund accordingly; • Work with community to create short all ability links ie circular footpath / cycle routes) in both Tyndrum and Crianlarich areas; • Consider necessary bypass of West Highland Way where appropriate. 	<ul style="list-style-type: none"> • Work with Sustrans National Cycle Network to establish route and cost; • Work with local community to establish all ability trails – FCS provide limited seed capital if required.

B4 ESTIMATE OF TRAIL USAGE – LORNE FORESTS

B4.1 Introduction

In this section we have quantified likely trail usage numbers / patterns for each individual forest recommended for mountain bike single track / purpose-built development in Lorne.

As part of our method of calculation, the consultants have quantified the size of the local resident population within a one-hour drive time of the key population centres in Scotland (see Section 6). From this, a calculation of the people who actively participate in mountain biking as a sport and the potential number of mountain bike trips a year generated by local residents have been estimated. This has been used as a cross-check to enable us to verify our projections.

At this time the consultants have only developed a cross-check model for Central Scotland local resident population. This covers cycle developments at: Glentress, Carron Valley, Blairadam, Queen Elizabeth Forest Park, Ardgartan, and Craigvinean Forests. It is estimated that the total local resident trips to these forests as quantified by TRC equates to about only 22% of all the mountain bike trips generated by the Central Scotland local resident population. In our opinion our quantification for individual forests by local Central Belt visitors is realistic.

Research has revealed that cycle routes which are located close to a person's residence ie a local centre will be used much more often (many more repeat visits) than those located further away. Visits to national and regional centres will also occur, but as more organised or formal cycle trips throughout the year. These types of issues have all been considered and weighted against our own penetration rate analysis detailed in the following section.

What must be borne in mind is that each regional centre will also be a local centre for some of the local resident market, although in general, day visitors will be prepared to travel up to about two hours to visit an attraction / carry out a recreation activity and even more if the attraction is unique (one of a kind ie see Glentress experience). We believe it is more prudent as more purpose-built single track cycle venues are developed across Scotland that each is assessed on its ability to attract a local population or tourist market from only a one-hour drive time. This will avoid and limit the issue of market overlap and displacement. The number of potential visitors to each forest site has therefore been quantified on this basis.

B4.2 The Penetration Criteria

As part of our isochrone analysis methodology TRC consultants have applied a penetration percentage to each individual forest site, based on its likelihood / potential market share. The penetration model has been applied to local resident, day visitor and both UK and overseas overnight tourist markets.

Every tourist or leisure facility, whether it be swimming pool, cinema or visitor attraction penetrates its market to a greater or lesser degree. The level of penetration applied will depend upon a whole host of tangible differences / variances re quality of attraction, reputation of attraction, facilities offered by attraction etc. In other words an established / quality product will penetrate its market potential much more than a similar product with more limited market appeal. Indeed, in mountain biking terms, Glentress has a high penetration level for the day visitor markets and this is a direct result of its 'fit' with the markets demands / requirements ie product quality, scale of development, access, brand, proximity to Edinburgh and the North of England markets, and central facilities (ie the Hub, now with separate brand 'the Hub in the Forest'). It is these positive factors which give Glentress such a high penetration rate / flex of the day visitor market.

A breakdown of the penetration ‘influences’ used to calculate trail usage patterns are detailed below.

PENETRATION RATE – ‘INFLUENCES’	
Type	Description
Destination	- Overall strength as a visitor / tourist destination, level of appeal / impression / reputation, etc;
Captive Market	- Loci, level of competition in area, level of difficulty in attracting market, distance to next venue, degree of other linked recreation experiences in the area;
Tourism Infrastructure	- The cluster effect ie level of wider market offering – tourism / recreation, services facilities re accommodation, brand etc. holistic / interlinked v fragmented;
Transport / Access	- Level of supporting transport infrastructure / appeal as an access destination ie easy access v remote. Public transport links;
Linkages	- Links to other tourism / service facilities in the wider area re food and drink / accommodation, visitor attractions, activity provisions, etc;
Day / Half-Day Experience	- Value / length of stay / other facilities, linkages to other similar facilities / critical mass opportunities / synergy;
Distance From Market	- Loci / transport / convenience / population catchment, access to markets;
Urban and Rural	- Appeal / remoteness / attractiveness, access;
Overnight Potential	- Economic impact – high / low level benefits;
Accommodation Potential	- Product quality, offering, suitability, price;
Product	- Scale, size, quality / differentiation / appeal / range of developments;
Market	- Scale, size, shape, dynamics;
Skill Level of Market	- Requirements / linkages / facilities;
Breadth of Market	- Appeal / number of different target markets / growth opportunity, niche v mass market;
Inclusive Not Exclusive	- Social / community / health / wider impacts / benefits.

Note: Each individual forest has been evaluated against these penetration influences on the basis re level of positive or negative impact. These criteria were then used to finalise penetration rates for each forest area calculated.

B4.3 The Range of Penetration Rates

The table below highlights the range of penetration rates used in our examination of key forests.

A range of penetration rates for day visitors, UK visitors and overseas visitors is provided. Levels of repeat visits for the day visitor market are based on the length, type, scale, quality of product provisions on offer to the local market and is related to local market population, active bike club participants, local enthusiasts, community aspirations, etc, as well as the above ‘penetration criteria’. For overnight visitors, we have assumed no opportunity for repeat visits ie one visit per overnight tourist.

PENETRATION RATE RANGE USED			
Market Type	Low	High	Repeat Visit Times
Day Visitor Penetration Rates	5%	50%	1.5 to 4
UK Overnight Penetration Rates	4%	40%	None
Overseas Penetration Rates	1%	10%	None

Note: These ranges are indicative and should not be attributed to solely one forest site under investigation.

B4.4 Basis of Calculation – Lorne Forest District

Local Resident Market

The Lorne Forests population isochrones have been drawn and the size of local population catchment quantified, at drive time intervals of 0-1 hour and 1-2 hours as follows:

ESTIMATED SIZE OF LOCAL RESIDENT CATCHMENT		
Cycle Forest	0-1 Hour	1-2 Hours
Brecklett	26,483	1,639,874
Barcaldine	23,623	429,033
Fearnoch	18,843	1,243,005

In order to minimise market duplication / minimise displacement and in conjunction with previous TRC forest cycling studies, only the one-hour local resident catchment population has been used in the further calculations in this study.

As outlined in previous studies (and noted in earlier sections of this report), TRC have assumed that on average 6% of the UK population actively participate in mountain biking as a sport (based on Sports Marketing Survey’s data). By applying this to the local resident market catchments, the number of people who actively participate in mountain biking in Lorne has been quantified.

As is widely known, there is no up-to-date market data on the number of people cycling in the UK. Cycle ownership in the UK is still increasing but there is no evidence to actually support a growth in ‘off-road’ mountain biking. However, the consultants believe that the development and promotion of a sustainable trail networks combined with the Land Reform Act (re new access legislation), the development of high quality purpose-built single track cycle centres across Scotland, new cycle products and brands: the health agenda, etc cannot fail to grow the overall market or at least make Scotland / Cycle Scotland a more popular destination for ‘off-road’ cycling for both local residents and visitors. As a result we have presented a low and high range by flexing the number of residents who may cycle in the future.

NUMBER OF LOCAL RESIDENTS WHO PARTICIPATE IN MOUNTAIN BIKING WITHIN A ONE-HOUR DRIVE TIME					
	Local Population 0-1 Hour	Static % Participation (Low)	Number of Mountain Bikers	Growth % Participation (High)	Number of Mountain Bikers
Brecklett	26,483	6%	1,589	6.5%	1,721
Barcaldine	23,623	6%	1,417	6.5%	1,535
Fearnoch	18,843	6%	1,131	6.5%	1,225

These active mountain bikers would then be penetrated and attracted to each purpose-built single track forest cycling development. The level of penetration depends on the type, style and range of facilities and the strategic positioning of each centre – as mentioned previously. The local resident market living within the one-hour drive time will be inclined to make multiple visits to the cycle venue.

Tourist Visitors

In TRC's and EKOS' previous analysis of the national mountain bike site at Glentress as part of the evaluation study, it was identified that 25% of the mountain bike market stayed overnight ie they were overnight tourist visitors with many visiting from England.

TRC have estimated the number of tourist trips within the one-hour drive time catchment isochrone of each forest. (Research has shown that it is very unlikely tourists will travel from their overnight accommodation for more than one hour). These estimates of visitor trips have been based on 2003 United Kingdom Tourism Survey (UKTS) and International Passenger Survey (IPS) data as published on www.scotexchange.net.

The consultants have estimated the proportion of overnight tourists within the isochrone. In 2003, VisitScotland produced a factsheet on cycle tourism in Scotland which demonstrated that 8% of all UK tourists cycle during their trip to Scotland (this includes visitors on both cycling and general holidays). A greater proportion of UK visitors may cycle whilst on holiday to Scotland in the future. To reflect this, a scenario where 10% of people on holiday are assumed to cycle has been prepared. No information is available for overseas tourists, but TRC have assumed a lower level of penetration without future increase due to the average profile of the overseas visitors to Scotland.

The number of potential 'cycling tourists' within the one-hour drive time isochrone of each forest has been estimated as follows:

UK CYCLE TOURISTS WITHIN THE ONE-HOUR DRIVE TIME					
	(Non-Business) No. of UK Tourist Trips	UK Visitors Who Cycle			
		% (Low)	Number (Low)	% (High)	Number (High)
Brecklett	576,400	8%	46,112	10%	57,640
Barcaldine	466,400	8%	37,312	10%	46,640
Fearnoch	500,500	8%	40,040	10%	50,050

OVERSEAS CYCLE TOURISTS WITHIN THE ONE-HOUR DRIVE TIME			
	(Non-Business) No. of Overseas Tourist Trips	Overseas Visitors Who Cycle	
		%	Number
Brecklett	67,680	5%	3,384
Barcaldine	48,880	5%	2,444
Fearnoch	47,000	5%	2,350

Note: No high range assumed, limited opportunity.

The consultants have then applied a penetration rate to the quantified potential tourist visitor cycle market and outcomes re final trail usage totals are now detailed.

Trail Usage Calculation

In order to assess the level of penetration for the Lorne single track cycle trails, a visitor model has been developed for the national cycle centre at Glentress, based on the findings from the visitor survey as part of the 7stanes evaluation and the estimated 150,000 visitors at Glentress as follows:

COMPARATIVE PENETRATION MODEL – GLENTRESS						
Day Visitors	Catchment Population	% Who Mountain Bike	Penetration Rate %	No. of Multiple Visits	No. of Users	%
0-1 Hour	1,229,600	6%	40%	2.5	73,776	48%
1-2 Hours	3,246,657	6%	20%	1.0	38,960	26%
Overnight Visitors	Visitor Trips	% Who Cycle	Penetration Rate %	No. of Multiple Visits	No. of Users	%
UK Tourists	3,999,200	8%	12%	1.0	38,392	25%
Overseas Tourists	820,310	5%	3%	1.0	1,229	1%
Total					152,358	100%

The above model demonstrates that Glentress attracts approximately 150,000 cycle visitors and approximately 75% of the visitors are day visitors and 25% overnight visitors. This reflects the results of the visitor survey carried out as part of the evaluation process. The penetrations for Glentress are high, demonstrating icon status of this national cycle attraction (ie see penetration criteria 'fit'). For regional and local facilities, the penetration levels would be less. Local community facilities (Type A and B) will generate a higher proportion of repeat visits amongst the one-hour drive time market, particularly if the facility has been built by community volunteers / local bike clubs ie Type A local facilities.

Consultants now detail below a breakdown of the penetration rates for the Lorne Forests based on our earlier penetration criteria.

PENETRATION MODEL						
	Local Residents Day Visitors			Overnight Tourist Visitors		
	Drive Time	Penetration Rate %	Multiple Visits	Tourists	Penetration Rate %	Multiple Visits
Brecklett	0-1 Hour	25%	4.0	UK	20%	1.0
				Overseas	5%	1.0
Barcaldine	0-1 Hour	15%	4.0	UK	8%	1.0
				Overseas	3%	1.0
Fearnoch	0-1 Hour	15%	2.5	UK	10%	1.0
				Overseas	3%	1.0

Based on the above assumptions and comparisons, a detailed visitor usage model has been prepared for each forest centre under two scenarios low and high usage. The purpose of this range is to provide FCS with an indicative trail usage scenario. This usage assumes that the product development recommendations for each forest have been executed.

The estimated number of cycle users and the demand breakdown per forest is summarised below.

NUMBER OF TRAIL USERS – LOW					
	Day Visitors		Overnight Visitors		Total Visitors
	Number	%	Number	%	
Brecklett	1,589	15%	9,391	85%	10,980
Barcaldine	850	22%	3,058	78%	3,908
Fearnoch	424	9%	4,075	91%	4,499

NUMBER OF TRAIL USERS – HIGH					
	Day Visitors		Overnight Visitors		Total Visitors
	Number	%	Number	%	
Brecklett	1,721	13%	11,697	87%	13,418
Barcaldine	921	19%	3,804	81%	4,725
Fearnoch	459	8%	5,076	92%	5,535

A breakdown of the overnight visitors has been summarised as follows. Again the tables show trail usage based on today's market data as well as an assumed high-side scenario.

OVERNIGHT VISITOR BREAKDOWN – LOW					
	Number of Overnight Visitors	UK		Overseas	
		Number	%	Number	%
Brecklett	9,391	9,222	98%	169	2%
Barcaldine	3,058	2,985	98%	73	2%
Fearnoch	4,075	4,004	98%	71	2%

OVERNIGHT VISITOR BREAKDOWN – HIGH					
	Number of Overnight Visitors	UK		Overseas	
		Number	%	Number	%
Brecklett	11,697	11,528	99%	169	1%
Barcaldine	3,804	3,731	98%	73	2%
Fearnoch	5,076	5,005	99%	71	1%

B4.5 Conclusion

The Lorne Forest cycle developments, assuming they are all developed to level recommended by TRC, as stipulated in the product recommendations section of this report, will generate nearly 20,000 cycle uses per year. The majority of demand from each of the local developments will be overnight visitor orientated, although a high repeat penetration has been assumed by local community's / bike clubs etc. The local population catchments of Lorne are all rather small, thus the main overall proportion of cycle use will be visitor orientated. The Forests of Lorne will be strategically positioned to support Lochaber, 'the outdoor capital' and the visitor destinations of Oban / Crinan.

Consultants believe Brecklett Forest in Lorne has the greatest opportunity. It will generate 85% of demand from visitors and the immediate area is already a highly recognised outdoor activity destination – see Glencoe. There is a good opportunity to link with other outdoor provisions in the area, National Trust Visitor Centre, etc. Brecklett, if developed as a cross-country single track centre, will complement Witch's and Laggan Wolftrax re helping to consolidate the Lochaber Outdoor Capital credentials and attracting overnight tourism demand.

PART C – WEST ARGYLL FOREST DISTRICT

C1 ANALYSIS OF PROPOSED FOREST CYCLING IN WEST ARGYLL FORESTS

In this section we have prepared an analysis of the West Argyll Forest District and assessed individual forests on the basis of their potential for future forest cycling development.

In some of the cases under study, development of single track off-road forest cycling has already commenced while in other areas the cycling infrastructure is very limited. For the purposes of this study, each potential loci has been assessed with a market-led rationale and this fits with a key guiding principle of the mountain bike and cycle strategy prepared for the National Forest Estate. This has been prepared irrespective of any cycle developments to date. As part of this analysis, there was consultation amongst key stakeholders and representatives of each forest. TRC consultants prepared a detailed analysis of an individual forest re location, access, sensitivities and strengths and weaknesses etc. We have also identified the strategic positioning, market opportunities and resulting potential wider benefits for each site.

A breakdown of our findings is highlighted overleaf in tabular bullet point format:

WEST ARGYLL FOREST DISTRICT							
Reference Area	Forest Characteristics	Forest Cycling Development History	Strengths	Weaknesses	Existing Forest and Recreation and Wider Tourism Infrastructure Provisions	Wider Benefits	Market Opportunities
Carradale Focus							
Carradale	<ul style="list-style-type: none"> The forest is located on the Eastern side of the Kintyre peninsula on the B842 North of the village of Carradale; The village of Carradale was once a popular holiday destination served by the Clyde steamers. Recently the forest has had a strong influence on the village with large-scale forestation beginning in the early 1950s; Carradale forest is currently undertaking a programme of harvesting and planting, this has produced a forest with a wide range of species; The forest has additional diversity and interest and includes trees and moorland hillside. 	<ul style="list-style-type: none"> Currently there is no single track cycle development in the forest, although FCS has invested in trail / route development to the sum of £5,000 in the forest as part of the Kintyre Way long-distance walking route Tarbert to Southend (Kintyre). Trails are waymarked and multi-purpose. Anecdotally to date demand from cyclists to the new tracks has been and is likely to be limited; The National Cycle Network Sustrans Route 73 runs from Campbeltown to Clonaig and on to Arran and passes the forest. This also links, with the proposed National Cycle Network Sustrans Route 78 Clonaig to Oban / Fort William. 	<ul style="list-style-type: none"> Existing visitor centre (The Network Centre); From the forest there are stunning views of Arran and the Kintyre peninsula; Carradale is a large forest area; Footpaths are currently being improved up the North side of Deerhill, resulting in a second walking loop being created; The long-distance footpath – the Kintyre Way crosses the forest; Links to National Cycle Network Overnight tourist visitor infrastructure already in place – accommodation, hotels and caravan park etc; Other activity links in area include: golf course, pony trekking, fishing, walking and eagle watching etc; Good links to the local community. 	<ul style="list-style-type: none"> Very small resident population; Very seasonal overnight tourist demand; Limited potential re volume of day visitor demand; Circular Shore route difficult due to erosion; Steep hill route, terrain difficulties / wet in places. 	<ul style="list-style-type: none"> Two main walks begin at the Port Na Storm car park and include the Deer Hill walk, a 2 hours, 3 miles route offering excellent panoramic views of Kintyre. A new hill path has recently been constructed. This route is part of the long-distance Kintyre Way. The Shore Walk is a 3 hours, 6 miles trail which uses mainly forest roads. The current trail endured a landslide and has now been partially washed away; The Carradale Heritage Centre adjacent to the forest offers interesting graphic displays of the area's farming, fishing and forestry history. 	<ul style="list-style-type: none"> Social and health benefits for local community; There are only limited wider benefits, simply because the local catchment area is very small, thus only local / community benefit will be apparent; Trails will offer opportunity to create direct linkages with the local village of Campbeltown. 	<ul style="list-style-type: none"> Local community; Links to other activity markets; Families and overnight holiday visitors linked to caravan park / camping and local accommodation stock; Opportunities for day visitors from Campbeltown / Lochgilphead; Linkages with cyclist on the West coast ie Epic long-distance market, (see National Cycle Network Sustrans Route 73), 5-10 year development aspiration. Arran links, etc.

WEST ARGYLL FOREST DISTRICT							
Reference Area	Forest Characteristics	Forest Cycling Development History	Strengths	Weaknesses	Existing Forest and Recreation and Wider Tourism Infrastructure Provisions	Wider Benefits	Market Opportunities
Lochgilphead Focus							
Kilmichael	<ul style="list-style-type: none"> This vast forest covering some 30 square miles is accessible via the A83 trunk road; The forest is adjacent to Lochgilphead and within a one-hour drive of Oban; FCS' three main car park (access points) are Loch Glashan Dam, Achnabreck and Kilmory Woodland Park; Kilmichael is located in an area of low population. Glasgow its nearest major population centre is some 2 hours away; Kilmichael contains a number of ancient monuments ranging from cairns through to ruined homesteads. 	<ul style="list-style-type: none"> Recently FCS has developed a red graded trail accessed from the Achabreck car park – development cost was £25,000; Red route targets intermediate to advanced riders; The process of marketing / raising awareness of product is very much at an embryonic stage. This is a key objective for the community / cycle club; There is a small / active mountain biking club in Lochgilphead (Mid Argyll Cycle Club) with around 25-30 members. The forest is heavily used by bikers of all cross-county / freeride disciplines; Aspirations to build another 2-3 single track routes on the back of a previous (Dafydd Davis) study. This will include a blue and red trail development; Another forest trail is the Leacann Muir Cycle Trail, a 4-7 hours, 41km Epic long-distance route; Forest also contains an extensive network of forest roads and quad tracks re Loch Glashan cycle trail; There is a good cycle shop Crinan Cycles located in Lochgilphead to support a growing cycle need. 	<ul style="list-style-type: none"> The good road access to the Forest off A83; Forest entrance very close (surrounds) Lochgilphead via Kilmory / Canal; Undulating terrain will enable flowing trail route development; Vast forest area with points of interest lochs, and fine views; Variety of experiences: moorland, hill ridge, water-based tracks, knolls, dark / open forest, etc; Good network of forest roads can be used for cycle ascent; Very keen local bike club Mid Argyll Mountain Bike Club with 25 / 30 core members – trail building maintaining possibilities; Very keen and enthusiastic forestry staff to drive project forward and liaise with local bike community; Disused farm stead at trail head suitable for central facilities development; Good well used existing single track trail of red grade (black sections) built in conjunction with bike club; Very high level of viable mineral content in soil lends itself well to trail construction; Signature trail development being considered at red / blue level; Three stack loop network of trails being considered and fully integrated web approach could easily be added in future; Feeling of openness / 'big country'; Proposed that high quality professional trails be professionally designed. 	<ul style="list-style-type: none"> Small resident population; New single track development is located in Achabreck car park, this is 3.5km away from Lochgilphead; Two to three hours travel time from Glasgow (a bit too far for day visitors); Some sections of the existing single track route may not be sustainable in long term; Full bench cut sustainable trails may be challenging in places due to terrain and soil type; A critical mass of facilities is required to capture overnight visitor market; Scenery not as attractive as Knapdale – as a tourist destination; Crinan is already the destination for family cycling – along the canal may not compete with this already recognised product; No outdoor centres identified in the immediate area; Potential visitor management issues conflicts at Kilmory. 	<ul style="list-style-type: none"> Car parks limited in scale and number for such a large forest; Number of walks including the Glashan Walk and the Otter Ferry Walk; Wider tourism infrastructure hotels / accommodation Ardrishaig and Crinan and the canal. Crinan is a magnet for visitors. 	<ul style="list-style-type: none"> Become the regional face of mountain biking in Argyll. Raise the profile of the area re brand / image and destination appeal; Maximise economic benefit of attracting short breaks / overnight visitor markets; Become one of the foci for overnight visitor cycle tourism in Scotland; Create knock-on benefits to other outdoor-related activities in area re Crinan Canal, walking and horse riding to create a destination product; Significant economic / commercial benefit for the town of Lochgilphead; Potential to improve quality of life for local residents re social and health alternatives for youngsters in a peripheral area where there is less alternative ie 'things to do'; Opportunity to give new markets a tester of mountain biking as a sport; Link Kilmichael to Knapdale and the Canal to create regional mountain bike – Cycle Crinan destination. 	<ul style="list-style-type: none"> Attract local residents and bike club usage; Freeriders; Attract overnight tourist visitors for short break stay; Attract other West of Scotland bike clubs for day visit; Cross-country / Epic-seeking market; Intermediate to advanced rider target market; Links to outdoor activity provisions re tuition; Links to Lochgilphead; Enthusiast riders; Link to Knapdale re family and novice market; If Knapdale is linked to Kilmichael and Crinan Canal could become a regional centre – re <u>Cycle Crinan</u> ie destination focus; Link Kilmichael with 'new haul' route Loch Awe and Inveraray to give Epic opportunities.

WEST ARGYLL FOREST DISTRICT							
Reference Area	Forest Characteristics	Forest Cycling Development History	Strengths	Weaknesses	Existing Forest and Recreation and Wider Tourism Infrastructure Provisions	Wider Benefits	Market Opportunities
Lochgilphead Focus							
Knapdale	<ul style="list-style-type: none"> Knapdale forest is located to the South and West of Lochgilphead on the B8025 via Tayvallich. It is an area of unspoilt natural beauty, which is flanked to the North by the Crinan Canal; Barnluasgan was designated a Caledonian Forest Reserve in 1994 and encourages conservation and control; The area is remote and distant from a mass population catchment; Knapdale contains a number of ancient monuments ranging from cairns through to ruined homesteads and the ruins of the water mill at Kilmory; Multi-purpose forest offering with access and recreational activities for all. 	<ul style="list-style-type: none"> The Lochan Buic cycle trail is 2½ hours and 10 miles long and is a moderate family-orientated route. Although if you miss the waymarked signs you can easily lose your way in this big forest with a mass of forest roads; Ferry Isles Cycle Trail is 1½ hours, 6 miles red out and back waymarked trail and is flat making it suitable for families. The trail passes an ancient chapel and holy well; Ardnoe Cycle Trail, a 2 hour, 13 miles yellow waymarked trail encompassing panoramic views over Moine Mhor National Nature Reserve most of the route is on forest road; At present there are no single track developments; Neither the local mountain bike club nor local resident population use the Knapdale forest / trails regularly; It is utilised by visitors predominately. 	<ul style="list-style-type: none"> Three existing signed cycle trails; Fantastic views of Jura /Islay from circular route; Existing forest road routes easily cycled by families although safety issues on some forest descents; Knapdale linked to Lochgilphead / Kilmichael by Crinan Canal towpath; Faery Isles route very flat good for small children and 'tag-a-longs'; Faery isles route mix broad leaf forest and very attractive short out and back route. 	<ul style="list-style-type: none"> Small local resident population within a one-hour drive; Limited opportunity for single track; Limited opportunity for East / West routes due to terrain; Lochan bike route rather limited basic and boring single forest structure. 	<ul style="list-style-type: none"> Number of small car parks; Includes the Barnluasgan Interpretation and Visitor Centre; Number of waymarked walks promoted including the Dunardry walk, Barnluasgan Trail, Loch Coille – Bhar and the all ability wildlife trail; Demand from trail riding / horse outings is high re private horse trail businesses; Fishing permits for the lochs around Knapdale are available; Links to Crinan Canal – Crinan / Cairnbaan. 	<ul style="list-style-type: none"> Opportunity to develop and maximise the potential of the area on the back of cycle links via Knapdale / Crinan and Kilmichael; Stunning views and natural beauty. The area could benefit greatly from word of mouth and marketing; Little social / health benefit ie little surrounding population catchment; Opportunity based on overnight / tourist and short break markets; Some social inclusion accessibility issues could be addressed through all ability trails approach. 	<ul style="list-style-type: none"> Family routes; Attractive to VFR market; Low skill level required; Routes suitable for older people / couples; Overnight / short break tourist markets; Suitable for young children Promote links with Crinan Canal and Kilmichael forest; Given scenic beauty there is an opportunity to create an Epic 'mini' product brand for the Ardnoe route targeted at families and older cyclists (see separate section); See links to Kilmichael for other Epic route opportunities.

C2 STRATEGIC POSITIONING AND TARGET MARKETS – WEST ARGYLL FORESTS

C2.1 Introduction

Continuing on from the review and appraisal of each forest area as detailed in Section C1, the consultants now present a summary of the recommended strategic positioning and target markets for each forest cycling loci currently under consideration in West Argyll.

C2.2 Strategic Positioning

The strategic positioning of a future purpose-built mountain bike centre in West Argyll has been considered against the development criteria as outlined in Section 5 of this report. The strategic positioning reflects an indication of the market potential, likely level of economic benefit re local, regional and national impacts, and the scale of product development, links to infrastructure and wider tourism destinations. In some cases the consultants have grouped one or more forests together, where for positioning and critical mass purposes the destination / development reflects more than simply one forest area ie Knapdale and Kilmichael. These forests would be marketed together as a regional centre for forest cycling – Cycle Crinan – the addition of circular Epic routes would help to increase the critical mass of facilities and promote overnight stays. The consultants' positioning conclusions for each forest within the district are provided as follows.

WEST ARGYLL FOREST DISTRICT – STRATEGIC MARKET AND PRODUCT POSITIONING

	Local Centre			Regional Centre	National Centre	Cycle Through Route	Conclusion on Positioning Opportunity
	Type A Volunteer Enthusiasts	Type B Wider Access / Inclusion For All	Type C Tourism				
				Wider Market Appeal	National Appeal	Links	
Carradale Focus							
Carradale	<ul style="list-style-type: none"> Not developed – no volunteers. 	<ul style="list-style-type: none"> Small-scale community school youth opportunities; Social inclusion opportunities; Good access to all in Kintyre. 	<ul style="list-style-type: none"> Improve tourism / recreation provision in area; Improve destination appeal of area; Encourage longer stays, increase spends; Caravan Park and local tourist trade. 	<ul style="list-style-type: none"> No regional opportunity. 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Longer-term through route links to main National Cycle Network Sustrans Route 73; Kintyre Way opportunities. 	<ul style="list-style-type: none"> Local facility Type B and C – small scale. Limited visitors, strategic links.
Lochgilphead Focus							
Knapdale and Kilmichael	<ul style="list-style-type: none"> Very successful local volunteer / cycle club network; Community-led development with FCS support; Very proactive, already built red grade Fire Tower Trail. 	<ul style="list-style-type: none"> Little population catchment. Potential to pull from Oban; Small-scale school and activity centre-related access opportunities. 	<ul style="list-style-type: none"> Recognised tourism destination (see Crinan); Enhance tourism product offering; Satisfy existing tourism infrastructure; Create / new overnight / markets; Links to sailing, walking and Crinan Canal – popular destination appeal. 	<ul style="list-style-type: none"> Regional aspirations due to wide market appeal ie tourists and local groups; Strategic opportunity of regional potential; Linking Kilmichael to Knapdale; Sufficient tourism infrastructure; Crinan Canal is the destination if supported by Oban infrastructure. 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Ensure routes between Knapdale and Kilmichael are effective and signed. Links between the two are essential if maximising opportunity; Crinan Canal link strategically important; National Cycle Network (see aspirations for Campbeltown Oban route) and links to Fort William / Inverness. 	<ul style="list-style-type: none"> Knapdale Type C and Kilmichael Type A have the opportunity to become regional focus of cycling in West Argyll; A Crinan focus will boost visitor credentials / appeal; Link to National Cycle Network and Epic product.

Market Fit

Based on the strengths and weaknesses analysis and the general market opportunities identified, together with an understanding of the general terrain and forest structure, the following summary tables of cycling target markets have been prepared.

The cycle target markets adopted are those which have been highlighted and defined in Section 4. Each of the key forest areas in West Argyll Forest District under study have been considered against the relative / potential strengths of the product which could be developed due to the current level of development, terrain, strategic positioning etc.

TARGET MOUNTAIN BIKE MARKET OPPORTUNITIES							
	Families / Schools / Social Inclusion	Novice	Enthusiast	Cross- Country ⁽¹⁾	Downhill	Events	Freeride
Carradale Focus							
Carradale	✓✓	✓✓	X	X	X	X	X
Lochgilphead Focus							
Knapdale and Kilmichael (linked to Crinan)	✓✓✓	✓✓✓	✓✓✓	✓✓✓	X	✓✓	✓

Note: (1) Includes potential for Epic route products.

TARGET MARKET SKILL LEVEL				
	Novice	Intermediate	Advanced	Events
Carradale Focus				
Carradale	Medium	Medium	-	-
Lochgilphead Focus				
Knapdale and Kilmichael	High	High	High	Local Club and Regional

C2.3 Positioning Summary

- The above table shows that Carradale has limited market opportunity. Such is its geographical remoteness, large development expenditure would be difficult to justify. As a result only a limited cycle product should be developed and this should only be on the basis that they are multi-user ie walking, cycling etc. Existing footpath and forest road network should be augmented with the holiday cyclist in mind. Cycle routes will satisfy existing visitor markets rather than creating new markets to the area.

- There are opportunities to link to the National Cycle Network and the Kintyre Way promoting the long-distance cycle touring credentials of the Peninsula;
- It is envisaged that Knapdale and Kilmichael will be developed as a regional centre. If a critical mass of good quality facilities can be developed this should cater for all types of market user ie the forest loci has a market opportunity at both beginner and experienced riding level. It would offer strategic links between the forests, attract families, older couples, tourists as well as experienced riders and it would become the regional face of mountain bike Forest Cycling in West Argyll and should be branded as Cycle Crinan to promote and maximise the visitor potential;
- In order to succeed as a regional centre and attract overnight visitors, the quality and planning of a complete trail system will have to be exceptional, particularly given future developments closer to the Central Belt.
- Links to longer distance routes and other activities / recreation ie walking, sightseeing, local heritage etc should help to increase the opportunity for overnight short break tourist markets. As a regional focus the area will be able to promote novice and family cycling as well as being able to satisfy experienced and enthusiast requirements.

C3 PRODUCT DEVELOPMENT AND INDICATIVE TRAIL DEVELOPMENT COSTS – WEST ARGYLL FORESTS

Based on research findings, strategic positioning and product market fit analysis, the summary of development conclusions are as follows. Please note all indicative trail capital costs outlined exclude design fees and trail development project management costs. These additional costs usually add about 10%-12% to trail development costs.

TRC have estimated potential trail development costs based on benchmark analysis – as highlighted in Section 8. These costs have been presented at 2005 prices.

WEST ARGYLL FOREST DISTRICT – DEVELOPMENT RECOMMENDATIONS																																																																																												
	Product Opportunities	Product Development and Outline Trail Costs																																																																																										
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Carradale	<ul style="list-style-type: none"> Emphasis of the Carradale cycle product – is all ability trails using the existing path and forest road network ie upgraded trail network; Ensure Deerhill trail is maintained to a standard for all ability use and signed for cyclists; Investigate cost to create and complete – low level circular trail aimed at family and novice / excursion holiday cycling; Sign longer route utilising forest roads and public roads around Carradale area. 	<ul style="list-style-type: none"> No development of purpose-built single track recommended; Upgrade hill footpaths as required, cost not assessed at this time. <table border="1"> <thead> <tr> <th>Cost</th> <th>Quantity</th> <th>£ per unit</th> <th>£</th> </tr> </thead> <tbody> <tr> <td>Cost of signage for cycling</td> <td>30</td> <td>30</td> <td>900</td> </tr> <tr> <td>Total Costs</td> <td></td> <td></td> <td>£900</td> </tr> </tbody> </table>	Cost	Quantity	£ per unit	£	Cost of signage for cycling	30	30	900	Total Costs			£900																																																																														
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Kilmichael – linked to Knapdale to form Cycle Crinan	<ul style="list-style-type: none"> For Kilmichael to succeed as a mountain bike centre a high value sustainable trail system needs to be developed; A trail control point has already been established at Ach nabreck and this links in well with wider aspirations for Cycle Crinan ie links to the Crinan Canal and Knapdale; Achnabreck will be the main tourist visitor access to the trail network while local people will be more inclined to use Kilmory and Lochgilphead; It is recommended that a quality trail network system is developed which appeals to a wide market base; The network system should incorporate traditional stacked loops and also a network of additional trail alternatives to encourage increased length of stay and repeat visitation for tourists; Forest cycle routes could be accessed from three points in the future Ach nabreck / Kilmory and Lochgilphead. Multi car park assess points can work if well managed and signed (see Hamsterley forest). This gives route variety / increases linkages and retains market interest however it is harder to control and more difficult to create central facilities; A regional mountain bike facility needs to have central facilities however given likely visitor volumes at Crinan – full facilities will not be sustainable – support café and bike hire facilities should therefore be provided in Lochgilphead and good links from the forest to the town ensured; It is envisaged that families cycling the full length of the Crinan Canal would use Ach nabreck forest car park. This should be made larger to accommodate these visitors – a safe cycle cross point on the A816 needs to be ensured (see Ardgartan A83). This would alleviate car congestion / car parking in Crinan; A proper and detailed trail plan needs to be devised for this forest to maximise the trail network potential. At this stage however the following recommendations are made; The strategic emphasis of the product development should be high quality trails accessible to all; Augment existing red Fire Tower Trail to make route more sustainable, less fall line, manageable etc; 	<p>Trail development has been assumed in three phases, based on a trail network plan devised by Dafydd Davis (DD).</p> <table border="1"> <thead> <tr> <th colspan="4">INDICATIVE TRAIL DEVELOPMENT COSTS (BUILT TRAIL LENGTH)</th> </tr> <tr> <th>Phase I</th> <th>km</th> <th>£ per m</th> <th>£</th> </tr> </thead> <tbody> <tr> <td>Upgrade to Fire Tower Trail</td> <td>5</td> <td>10</td> <td>50,000</td> </tr> <tr> <td>Link from Fire Tower to new red loop (see DD 3.1 + 3.2 sections)</td> <td>2.6</td> <td>21.5</td> <td>56,000</td> </tr> <tr> <td>Create red / blue loop (see DD 1.1 + 1.5 sections)</td> <td>6.4</td> <td>19.7</td> <td>126,000</td> </tr> <tr> <td>Green skills trail at Ach nabreck</td> <td>1</td> <td>-</td> <td>15,000</td> </tr> <tr> <td>All ability green trail at Kilmory</td> <td>2</td> <td>15</td> <td>30,000</td> </tr> <tr> <td>Create blue link / network sections</td> <td>4</td> <td>15</td> <td>60,000</td> </tr> <tr> <td>Blue / red / black / skills area (see Hamsterley and Glentress)</td> <td>1.5</td> <td>-</td> <td>15,000</td> </tr> <tr> <td>Total Phase I Development Costs</td> <td></td> <td></td> <td>£352,000</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="4">INDICATIVE TRAIL DEVELOPMENT COSTS (BUILT TRAIL LENGTH)</th> </tr> <tr> <th>Phase II</th> <th>km</th> <th>£ per m</th> <th>£</th> </tr> </thead> <tbody> <tr> <td>Additional blue links (see DD 1.6 to 1.8)</td> <td></td> <td></td> <td>45,000</td> </tr> <tr> <td>DD black loop</td> <td></td> <td></td> <td>240,000</td> </tr> <tr> <td>Total Phase II Development Costs</td> <td></td> <td></td> <td>£285,000</td> </tr> </tbody> </table> <p>These indicative costs exclude car parking, shelters, toilets, bike wash and crossing point on A83</p> <table border="1"> <thead> <tr> <th colspan="2">Development Costs Phase I and II</th> <th>£637,000</th> </tr> </thead> <tbody> <tr> <td>Other Costs</td> <td>Quantity</td> <td>£ per unit</td> </tr> <tr> <td>Signs</td> <td>100</td> <td>30</td> </tr> <tr> <td>Trail counters</td> <td>3</td> <td></td> </tr> <tr> <td>Total Other Costs</td> <td></td> <td>£6,750</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="2">TOTAL COSTS</th> <th>£</th> </tr> </thead> <tbody> <tr> <td>Total Phase I Development Cost</td> <td></td> <td>352,000</td> </tr> <tr> <td>Total Phase II Development Cost</td> <td></td> <td>285,000</td> </tr> <tr> <td>Other Costs</td> <td></td> <td>6,750</td> </tr> <tr> <td>Total Development Costs</td> <td></td> <td>£643,750</td> </tr> </tbody> </table>	INDICATIVE TRAIL DEVELOPMENT COSTS (BUILT TRAIL LENGTH)				Phase I	km	£ per m	£	Upgrade to Fire Tower Trail	5	10	50,000	Link from Fire Tower to new red loop (see DD 3.1 + 3.2 sections)	2.6	21.5	56,000	Create red / blue loop (see DD 1.1 + 1.5 sections)	6.4	19.7	126,000	Green skills trail at Ach nabreck	1	-	15,000	All ability green trail at Kilmory	2	15	30,000	Create blue link / network sections	4	15	60,000	Blue / red / black / skills area (see Hamsterley and Glentress)	1.5	-	15,000	Total Phase I Development Costs			£352,000	INDICATIVE TRAIL DEVELOPMENT COSTS (BUILT TRAIL LENGTH)				Phase II	km	£ per m	£	Additional blue links (see DD 1.6 to 1.8)			45,000	DD black loop			240,000	Total Phase II Development Costs			£285,000	Development Costs Phase I and II		£637,000	Other Costs	Quantity	£ per unit	Signs	100	30	Trail counters	3		Total Other Costs		£6,750	TOTAL COSTS		£	Total Phase I Development Cost		352,000	Total Phase II Development Cost		285,000	Other Costs		6,750	Total Development Costs		£643,750
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Kilmichael (Cont'd)	<ul style="list-style-type: none"> • Create proper red grade 'chicken runs' around all black obstacles on Fire Tower Trail etc; • Create green skills loop at Ach nabreck car park focused on families; • Create blue network loop between Ach nabreck and Kilmory and link to all three forest access points create new red loop around Scotstounhill area – see Dafydd Davis Plan for loop (1.1 to 1.9); • Create two way link from Fire Tower Trail to new red loop extending Fire Tower Trail / red loop; • Create signature longer black route as Phase II aimed at higher skilled riders. • Put in all ability path re paths for all around Kilmory Lochan; • It is envisaged the quality of the trail network design will be the signature of the Kilmichael product; • Provide shelter / toilets and bike wash at Ach nabreck; • If SNH and FCS develop a presence at Kilmory then toilet and bike hire facilities could be made accessible there; • Create a skills area blue / red / black at Ach nabreck (see Kirroughtree a key benchmark for Crinan). 	<ul style="list-style-type: none"> • Regional FCS management believe that the trail plan devised by DD could be delivered for significantly less money than initially suggested; • Discussions with DD confirm that the trail costs could probably be reduced, once detailed survey work has been undertaken. The consultants stress, however, that the Crinan destination will require very high quality trails to help it compete for an overnight visitor market. If it is found that the trail network can indeed be delivered for less cost, serious consideration should be given to increasing scale of the trail network beyond that recommended by adding more red level loops / alternatives. This will help to cement the venue as an overnight visitor destination. 																													
Knapdale	<ul style="list-style-type: none"> • Knapdale linked to Kilmichael to create Cycle Crinan; • Improve signage on existing routes; • Ardnoe route would be part of future Epic 'mini' brand – signage required see 'Epics' brand opportunities; • Investigate possibility of creating link route between Crinan Canal and Ardnoe route. Due to gradient may have to link through Lochan. Introduce a high level of trail interpretation / art etc or trails to link forest and Crinan (see Loch Lomond and the Trossachs National Park or Rosehall Community Forest etc); • Note: Unit construction costs for Crinan ie Knapdale and Kilmichael are, it must be stressed, on the high side. TRC have based these on previous external consultancy indicative estimates (Dafydd Davis). However, other designers are known to be cheaper and a full exhaustive design survey would have to be concluded before future developments are undertaken. 	<table border="1"> <thead> <tr> <th>Costs</th> <th>km or Quantity</th> <th>£ per m or £ per unit</th> <th>£</th> </tr> </thead> <tbody> <tr> <td>Crinan Canal / Knapdale link multi-user trail</td> <td>5</td> <td>15</td> <td>75,000</td> </tr> <tr> <td>Improved signage or existing route</td> <td>30</td> <td>30</td> <td>900</td> </tr> <tr> <td>Creation of Epic brand signage</td> <td>20</td> <td>30</td> <td>600</td> </tr> <tr> <td>Trail counters</td> <td>2</td> <td>1,250</td> <td>2,500</td> </tr> <tr> <td>No allocation at this stage for Crinan Canal / Forest Links or its high level of interpretation</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Total Costs</td> <td></td> <td></td> <td>£79,000</td> </tr> </tbody> </table>		Costs	km or Quantity	£ per m or £ per unit	£	Crinan Canal / Knapdale link multi-user trail	5	15	75,000	Improved signage or existing route	30	30	900	Creation of Epic brand signage	20	30	600	Trail counters	2	1,250	2,500	No allocation at this stage for Crinan Canal / Forest Links or its high level of interpretation				Total Costs			£79,000
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No allocation at this stage for Crinan Canal / Forest Links or its high level of interpretation																															
Total Costs			£79,000																												

C4 ESTIMATE OF TRAIL USAGE – WEST ARGYLL FORESTS

C4.1 Introduction

In this section we have quantified likely trail usage numbers / patterns for each individual forest recommended for future mountain bike single track / purpose-built development in West Argyll.

As part of our method of calculation, the consultants have quantified the size of the local resident population within a one-hour drive time of the key population centres in Scotland (see Section 6). From this, a calculation of the people who actively participate in mountain biking as a sport and the potential number of mountain bike trips a year generated by local residents have been estimated. This has been used as a cross-check to enable us to verify our projections.

At this time the consultants have only developed a cross-check model for Central Scotland local resident population. This covers cycle developments at: Glentress, Carron Valley, Blairadam, Queen Elizabeth Forest Park, Ardgartan, and Craigvinean Forests. It is estimated that the total local resident trips to these forests as quantified by TRC equates to about only 22% of all the mountain bike trips generated by the Central Scotland local resident population. In our opinion our quantification for individual forests by local Central Belt visitors is realistic.

Research has revealed that cycle routes which are located close to a person's residence ie a local centre will be used much more often (many more repeat visits) than those located further away. Visits to national and regional centres will also occur, but as more organised or formal cycle trips throughout the year. These types of issues have all been considered and weighted against our own penetration rate analysis detailed in the following section.

What must be borne in mind is that each regional centre will also be a local centre for some of the local resident market, although in general, day visitors will be prepared to travel up to about two hours to visit an attraction / carry out a recreation activity and even more if the attraction is unique (one of a kind ie see Glentress experience). We believe it is more prudent as more purpose-built single track cycle venues are developed across Scotland that each is assessed on its ability to attract a local population or tourist market from only a one-hour drive time. This will avoid and limit the issue of market overlap and displacement. The number of potential visitors to each forest site has therefore been quantified on this basis.

C4.2 The Penetration Criteria

As part of our isochrone analysis methodology TRC consultants have applied a penetration percentage to each individual forest site, based on its likelihood / potential market share. The penetration model has been applied to local resident, day visitor and both UK and overseas overnight tourist markets.

Every tourist or leisure facility, whether it be swimming pool, cinema or visitor attraction penetrates its market to a greater or lesser degree. The level of penetration applied will depend upon a whole host of tangible differences / variances re quality of attraction, reputation of attraction, facilities offered by attraction etc. In other words an established / quality product will penetrate its market potential much more than a similar product with more limited market appeal. Indeed, in mountain biking terms, Glentress has a high penetration level for the day visitor markets and this is a direct result of its 'fit' with the markets demands / requirements ie product quality, scale of development, access, brand, proximity to Edinburgh and the North of England markets, and central facilities (ie the Hub, now with separate brand 'the Hub in the Forest'). It is these positive factors which give Glentress such a high penetration rate / flex of the day visitor market.

A breakdown of the penetration ‘influences’ used to calculate trail usage patterns are detailed below.

PENETRATION RATE – ‘INFLUENCES’	
Type	Description
Destination	- Overall strength as a visitor / tourist destination, level of appeal / impression / reputation, etc;
Captive Market	- Loci, level of competition in area, level of difficulty in attracting market, distance to next venue, degree of other linked recreation experiences in the area;
Tourism Infrastructure	- The cluster effect ie level of wider market offering – tourism / recreation, services facilities re accommodation, brand etc holistic / interlinked v fragmented;
Transport / Access	- Level of supporting transport infrastructure / appeal as an access destination ie easy access v remote. Public transport links;
Linkages	- Links to other tourism / service facilities in the wider area re food and drink / accommodation, visitor attractions, activity provisions etc;
Day / Half-Day Experience	- Value / length of stay / other facilities, linkages to other similar facilities / critical mass opportunities / synergy;
Distance From Market	- Loci / transport / convenience / population catchment, access to markets;
Urban and Rural	- Appeal / remoteness / attractiveness, access;
Overnight Potential	- Economic impact – high / low level benefits;
Accommodation Potential	- Product quality, offering, suitability, price;
Product	- Scale, size, quality / differentiation / appeal / range of developments;
Market	- Scale, size, shape, dynamics;
Skill Level of Market	- Requirements / linkages / facilities;
Breadth of Market	- Appeal / number of different target markets / growth opportunity, niche v mass market;
Inclusive Not Exclusive	- Social / community / health / wider impacts / benefits.

Note: Each individual forest has been evaluated against these penetration influences on the basis re level of positive or negative impact. These criteria were then used to finalise penetration rates for each forest area calculated.

C4.3 The Range of Penetration Rates

The table below highlights the range of penetration rates used in our examination of key forests.

A range of penetration rates for day visitors, UK visitors and overseas visitors is provided. Levels of repeat visits for the day visitor market are based on the length, type, scale, quality of product provisions on offer to the local market and is related to local market population, active bike club participants, local enthusiasts, community aspirations, etc, as well as the above ‘penetration criteria’. For overnight visitors, we have assumed no opportunity for repeat visits ie one visit per overnight tourist.

PENETRATION RATE RANGE USED			
Market Type	Low	High	Repeat Visit Times
Day Visitor Penetration Rates	5%	50%	1.5 to 4
UK Overnight Penetration Rates	4%	40%	None
Overseas Penetration Rates	1%	10%	None

Note: These ranges are indicative and should not be attributed to solely one forest site under investigation.

C4.4 Basis of Calculation – West Argyll Forest District

Local Resident Market

For the West Argyll Forests, population isochrones have been drawn and the size of local population catchment quantified, at drive time intervals of 0-1 hour and 1-2 hours as follows:

ESTIMATED SIZE OF LOCAL RESIDENT CATCHMENT		
Cycle Forest	0-1 Hour	1-2 Hours
Carradale	10,571	23,019
Cycle Crinan	20,287	1,007,832

In order to minimise market duplication, minimise displacement and in conjunction with previous TRC forest cycling studies, only the one-hour local resident catchment population has been used in the further calculations in this study.

As outlined in previous studies (and noted in earlier sections of this report), TRC have assumed that on average 6% of the UK population actively participate in mountain biking as a sport (based on Sports Marketing Survey’s data). By applying this to the local resident market catchments, the number of people who actively participate in mountain biking in West Argyll has been quantified.

As is widely known, there is no up-to-date market data on the number of people cycling in the UK. Cycle ownership in the UK is still increasing but there is no evidence to actually support a growth in ‘off-road’ mountain biking. However, the consultants believe that the development and promotion of a sustainable trail networks combined with the Land Reform Act (re new access legislation), the development of high quality purpose-built single track cycle centres across Scotland, new cycle products and brands: the health agenda, etc cannot fail to grow the overall market or at least make Scotland / Cycle Scotland a more popular destination for ‘off-road’ cycling for both local residents and visitors. As a result we have presented a low and high range by flexing the number of residents who may cycle in the future.

NUMBER OF LOCAL RESIDENTS WHO PARTICIPATE IN MOUNTAIN BIKING WITHIN A ONE-HOUR DRIVE TIME					
	Local Population 0-1 Hour	Static % Participation (Low)	Number of Mountain Bikers	Growth % Participation (High)	Number of Mountain Bikers
Carradale	10,571	6%	634	6.5%	687
Cycle Crinan	20,287	6%	1,217	6.5%	1,319

These active mountain bikers would then be penetrated and attracted to each purpose-built single track forest cycling development. The level of penetration depends on the type, style and range of facilities and the strategic positioning of each centre – as mentioned previously. The local resident market living within the one-hour drive time will be inclined to make multiple visits to the cycle venue.

Tourist Visitors

In TRC’s and EKOS’ previous analysis of the national mountain bike site at Glentress as part of the evaluation study, it was identified that 25% of the mountain bike market stayed overnight ie they were overnight tourist visitors with many visiting from England.

TRC have estimated the number of tourist trips within the one-hour drive time catchment isochrone of each forest. (Research has shown that it is very unlikely tourists will travel from their overnight accommodation for more than one hour). These estimates of visitor trips have been based on 2003 United Kingdom Tourism Survey (UKTS) and International Passenger Survey (IPS) data as published on www.scotexchange.net.

The consultants have estimated the proportion of overnight tourists within the isochrone. In 2003, VisitScotland produced a factsheet on cycle tourism in Scotland which demonstrated that 8% of all UK tourists cycle during their trip to Scotland (this includes visitors on both cycling and general holidays). A greater proportion of UK visitors may cycle whilst on holiday to Scotland in the future. To reflect this, a scenario where 10% of people on holiday are assumed to cycle has been prepared. No information is available for overseas tourists, but TRC have assumed a lower level of penetration without future increase, due to the average profile of the overseas visitor to Scotland.

The number of potential ‘cycling tourists’ within the one-hour drive time isochrone of each forest has been estimated as follows:

UK CYCLE TOURISTS WITHIN THE ONE-HOUR DRIVE TIME					
	(Non-Business) No. of UK Tourist Trips	UK Visitors Who Cycle			
		% (Low)	Number (Low)	% (High)	Number (High)
Carradale	50,050	8%	4,004	10%	5,005
Cycle Crinan	600,600	8%	48,048	10%	60,060

OVERSEAS CYCLE TOURISTS WITHIN THE ONE-HOUR DRIVE TIME			
	(Non-Business) No. of Overseas Tourist Trips	Overseas Visitors Who Cycle	
		%	Number
Carradale	15,040	5%	752
Cycle Crinan	56,400	5%	2,820

Note: No high range assumed, limited opportunity.

The consultants have then applied a penetration rate to the quantified potential tourist visitor cycle market and outcomes re final trail usage totals are now detailed.

Trail Usage Calculation

In order to assess the level of penetration for the West Argyll single track cycle trails, a visitor model has been developed for the national cycle centre at Glentress, based on the findings from the visitor survey as part of the 7stanes evaluation and the estimated 150,000 visitors at Glentress as follows:

COMPARATIVE PENETRATION MODEL – GLENTRESS						
Day Visitors	Catchment Population	% Who Mountain Bike	Penetration Rate %	No. of Multiple Visits	No. of Users	%
0-1 Hour	1,229,600	6%	40%	2.5	73,776	48%
1-2 Hours	3,246,657	6%	20%	1.0	38,960	26%
Overnight Visitors	Visitor Trips	% Who Cycle	Penetration Rate %	No. of Multiple Visits	No. of Users	%
UK Tourists	3,999,200	8%	12%	1.0	38,392	25%
Overseas Tourists	820,310	5%	3%	1.0	1,229	1%
Total					152,358	100%

The above model demonstrates that Glentress attracts approximately 150,000 cycle visitors and approximately 75% of the visitors are day visitors and 25% overnight visitors. This reflects the results of the visitor survey carried out as part of the evaluation process. The penetrations for Glentress are high, demonstrating icon status of this national cycle attraction (ie see penetration criteria 'fit'). For regional and local facilities, the penetration levels would be less. Local community facilities (Type A and B) will generate a higher proportion of repeat visits amongst the one-hour drive time market, particularly if the facility has been built by community volunteers / local bike clubs ie Type A local facilities.

Consultants now detail below a breakdown of the penetration rates for West Argyll Forests based on our earlier penetration criteria.

PENETRATION MODEL						
	Local Residents Day Visitors			Overnight Tourist Visitors		
	Drive Time	Penetration Rate %	Multiple Visits	Tourists	Penetration Rate %	Multiple Visits
Carradale	0-1 Hour	25%	2.5	UK	25%	1.0
				Overseas	5%	1.0
Cycle Crinan	0-1 Hour	35%	4.0	UK	25%	1.0
				Overseas	5%	1.0

Based on the above assumptions and comparisons, a detailed visitor usage model has been prepared for each forest centre under two scenarios low and high usage. The purpose of this range is to provide FCS with an indicative trail usage. This usage assumes that the product development recommendations for each forest have been executed.

The estimated number of cycle users and the demand breakdown per forest is summarised below.

NUMBER OF TRAIL USERS – LOW					
	Day Visitors		Overnight Visitors		Total Visitors
	Number	%	Number	%	
Carradale	396	28%	1,039	72%	1,435
Cycle Crinan	1,704	12%	12,153	88%	13,857

NUMBER OF TRAIL USERS – HIGH					
	Day Visitors		Overnight Visitors		Total Visitors
	Number	%	Number	%	
Carradale	429	25%	1,289	75%	1,718
Cycle Crinan	1,846	11%	15,156	89%	17,002

A breakdown of the overnight visitors has been summarised as follows. Again the tables show trail usage based on today's market data as well as an assumed high-side scenario.

OVERNIGHT VISITOR BREAKDOWN – LOW					
	Number of Overnight Visitors	UK		Overseas	
		Number	%	Number	%
Carradale	1,039	1,001	96%	38	4%
Cycle Crinan	12,153	12,012	99%	141	1%

OVERNIGHT VISITOR BREAKDOWN – HIGH					
	Number of Overnight Visitors	UK		Overseas	
		Number	%	Number	%
Carradale	1,289	1,251	97%	38	3%
Cycle Crinan	15,156	15,015	99%	141	1%

C4.5 Conclusion

The target markets for both Carradale and Cycle Crinan are very similar and focused predominately on an overnight visitor market. Fundamentally both have low resident population catchments living within a one-hour drive. Therefore, although repeat visits amongst local users (ie enthusiasts / bike club members) is significant, the bulk of overall demand generated by these forest centres is visitor / tourist orientated ie 88% of Cycle Crinan is generated by overnight visitor demand and Carradale 72%.

It is with these statistics in mind that consultants recommend that Cycle Crinan becomes a regional focused cycling destination for overnight visitors. The area is already synonymous with cycling, and it has the potential to expand its niche product offering / appealing to a larger overnight cycling target market linked to other Argyll amenities re Canal, sailing, food and drink, scenery etc. Cycle Crinan will be a very tourist niche focused product unlike any other in Scotland and its penetration of the overnight visitor market will be significant. A cycling visitor destination will have to be created and a very high quality trail product / system developed good linkage to Epics and other circular routes must be ensured.

It is inevitable that it will be costly to create a cycle destination with significant critical mass to capture the overnight visitor (see Coed-y-Brenin in Wales – where a network of trails has been developed). It is the consultants' view that this will be required if this venue is to succeed and economic gain is to be maximised.

To help in this regard strategic marketing links should perhaps be formed with Barcaldine and Ardgartan Forests. (Ardgartan is 55 minutes away and Barcaldine an estimated 1 hour and 5 minutes drive. See links of Kirroughtree to Ae (1 hour, 14 minutes) and Dalbeattie (48 minutes) promoting overnight tourism. Kirroughtree is now supported by the upgraded 'Epic' route at Glentool.

Strategically however, the visitor may be inclined to stay in Oban, with its greater tourism infrastructure and entertainment choice, rather than in Lochgilphead or Ardrishaig. This would also give the visitor access to three centres within a one-hour drive time ie, the Regional Centres of Crinan and Brecklett and the 'local' experience at Barcaldine (see Dumfries experience).

PART D – SCOTTISH LOWLANDS FOREST DISTRICT

D1 ANALYSIS OF PROPOSED FOREST CYCLING IN SCOTTISH LOWLANDS FORESTS

In this section we have prepared an analysis of the Scottish Lowlands Forest District and assessed individual forests on the basis of their potential for future forest cycling development.

In some of the cases under study, development of single track off-road forest cycling has already commenced while in other areas the cycling infrastructure is very limited. For the purposes of this study, each potential loci has been assessed with a market-led rationale and this fits with a key guiding principle of the mountain bike and cycle strategy prepared for the National Forest Estate. This has been prepared irrespective of any cycle developments to date. As part of this analysis, there was consultation amongst key stakeholders and representatives of each forest. TRC consultants prepared a detailed analysis of an individual forest re location, access, sensitivities and strengths and weaknesses etc. We have also identified the strategic positioning, market opportunities and resulting potential wider benefits for each site.

A breakdown of our findings is highlighted overleaf in tabular bullet point format:

SCOTTISH LOWLANDS FOREST DISTRICT							
Reference Area	Forest Characteristics	Forest Cycling Development History	Strengths	Weaknesses	Existing Forest and Recreation and Wider Tourism Infrastructure Provisions	Wider Benefits	Market Opportunities
Kelty Focus							
Blairadam	<ul style="list-style-type: none"> Blairadam forest woodland covers an area of 1,200 hectares. Blairadam forest is located just outside the village of Kelty on the B914. It is also easily accessible off the M90 and is located a mere 40 minutes from Edinburgh. Keltyhill Wood is the main car park for forest recreation (there are two other car parks and forest access points at Centry and Loch Glow); The Glen is a very attractive path meandering by the Kelty burn and over looked by towering Sitka spruce trees; Blairadam forest has 20 miles of forest road; The forest itself was bought by Sir William Adam in 1733 and he went on to build Blairadam House – an impressive architectural structure; The forest is now owned and managed by FCS; The forest has many natural features and a diverse range of trees including beech, oak and birch. 	<ul style="list-style-type: none"> The forest is part of the Fife Millennium Cycleway campaign. There are three signed trails, using existing forest roads. The purple trail is a 6½ miles, moderate graded family route, a yellow trail which is a 2¼ miles, easy graded trail suitable for children and young families and a blue trail 3 miles moderate grade. All trails begin at the Keltyhill Wood car park; Blairadam Trail Development Group is a local bike club / community group. The club was formed in late 2003 and already has over 100 riders / members; The club have aspirations to build a web of trails and they aim to link / attract the current 7stanes market including blue, red and black graded single track users; Club recently began constructing a 9 miles red route development, hope to have completed by spring 2006; See potential for centralised facilities re toilets / café / changing room / car park. 	<ul style="list-style-type: none"> Recreational interest in the forest is supported by many local community groups; Any cycle developments would in principal have the support of all community groups re Kelty Steering Group, Fife Council and the Heritage Trust; Good access to the forest off M90; The forest is well used by local walkers, joggers, cyclists, horse riders and dog walkers but few user conflicts have been identified; Less than 40 minutes drive from Edinburgh; Historically important designed landscape area; Heritage connections to Robert Adam and strong local mining heritage; Forest already part of Fife Millennium Cycleway Initiative with three signed trails using existing forest road network; Kelty Heritage Trails have raised £130,000 for path restoration; Forest directly accessible from village of Kelty; Art and sculpture currently being developed in forest, adding interest. Art college created temporary environmental art works (see Kelty cat); Local interest in forest is high ie Blairadam Trail Development Group; Links to wider Fife cycleway network and Sustrans National Cycle Network; Forest is well used for informal recreation by the local community; WIAT opportunities. 	<ul style="list-style-type: none"> Better management of forest required re major problems with motorised vehicles (trails motorbikes) in forest / security / anti-social behaviour; Not a tourist <u>destination</u>, little tourist infrastructure in immediate locale, few opportunities for tourist linkages; Many paths and estate roads have become overgrown and blocked by windfalls; Local bike club have only recently begun to develop trail building sites; Improved construction / design skills and trail management is required; Possible competition with Glentress, same core market re Edinburgh; Terrain very wet / boggy in places. Has bad reputation for being a very wet area and boggy area. Particularly in winter this could add to design costs. 	<ul style="list-style-type: none"> Blairadam heritage trails are a network of multi-purpose trails, which seek to get people using the forest. It is also a place to learn about the heritage and the history of the forest. These trails are very popular with walkers; Currently the Heritage Trails group have raised £130,000 for path and bridge restoration; The heritage trails have been a success, and have helped create additional jobs / skills training; Forest provides educational ranger walks re local toddler groups, 'women and walks', environmental / heritage walks etc; Demand from the horse riding fraternity is also high, re easy access off M90, and 2 stables near the forest; Little conflict was identified between the differing user groups of the forest. 	<ul style="list-style-type: none"> The cycle footpath developments offer good social and health opportunities for the youth of the local surrounding community; The development is socially inclusive, giving significant health benefits to the local area ie local outdoor educational activity centre already uses facilities frequently; Development can help to improve the quality of life for locals, improve fitness and wellbeing, particularly in young people and families; Opportunities to link with local business re bike shop sales / hires etc; Opportunity to improve linkages to Millennium cycle routes and provide further support to the National Cycle Network; Opportunity to link with cycle Scotland re cycle education / 'off-road' / mountain bike cycle proficiency. 	<ul style="list-style-type: none"> Local bike club / volunteer groups; Local community group usage; Lochore Meadows (outdoor activity centre) keen to develop links with Blairadam development; Local Fife region and Edinburgh day visitor markets; Education, Heritage Links re Adam and coalmining; Training / educational links with local college / schools ie as previously carried out re heritage trail development; Healthy living and social inclusion re Fife Council and their Active Steps programme; School and youth groups within surrounding North-West Fife area; Other local outdoor activity centres – already using the facilities, lifelong learning opportunities; Links to Fife council and their Natural Connections Initiative ie scheme linked to education / fun and enjoyment; North-West Fife mining heritage exploited.

SCOTTISH LOWLANDS FOREST DISTRICT							
Reference Area	Forest Characteristics	Forest Cycling Development History	Strengths	Weaknesses	Existing Forest and Recreation and Wider Tourism Infrastructure Provisions	Wider Benefits	Market Opportunities
Stirling Focus							
Carron Valley	<ul style="list-style-type: none"> Located in the very heart of Central Scotland, high in the Campsie Fells, Carron Valley forest is vast. It is also close to a significant centre of population and as a result has one of the highest local resident catchments of any forest in Scotland (within a one-hour drive); Carron Valley is 20 minutes from Stirling, 30 minutes from Glasgow and 40 minutes from Edinburgh; The main access route from North Lanarkshire is via Dennyloanhead, Denny and the B818 Deny-Fintry Road, and from Stirling via Bannockburn and the B818; The area includes Carron Valley reservoir, which was created in 1939 and is owned by Scottish Water, castle being developed re Motte and Bailey Fort by the Clanranald Trust; At present a new or innovative visitor education development (Dun Carron Fort); Carron Valley has the feel of a wild / remote forest irrespective of its close proximity to main population areas of Central Scotland; A community sub-group aka Carron Valley Development Group has been set up to look at the leisure and recreational opportunities for the area – but at present this is predominately forest cycling. 	<ul style="list-style-type: none"> There is ongoing cycling development / construction of cycle trails planned for this forest; By the time of reporting Carron Valley Development Group will have completed stage 1 of their proposed cycle routes. This includes 4.1km of single track and 5km of forest road graded blue / red – development cost a approximated at £20 per km; There was no designated / waymarked trails in the forest pre the above 2005 forest cycle development although informal and unsustainable trails were in place; The Carron Valley Development Group has aspirations to construct an extensive web / network of trails in the future. They will be community-based and will serve a variety of cycle bike user groups for both challenging and more leisure-orientated needs; The aspirations of this community group are 'creating' trails for everyone. 	<ul style="list-style-type: none"> The biking club / Carron Valley Development Group are enthusiastic and very professional in their approach; Many attractive waterfalls – it is the forest's main selling point; Located close to North Lanarkshire communities – opportunity to introduce new participants to the sport, thus tackling issues such as poor health, inactivity and anti-social behaviour; Vast forest upwards of 50km squared so little conflict between varying user groups; Significant population within a one-hour drive time. Indeed it has the highest population catchment within a one-hour drive time in Scotland of all forest currently under study; Has potential links with Motte and Bailey Fort re centralised facilities / linkages / similar user groups; Forest has opportunity to benefit from wider links re reservoir / water sport-based activity, walkers and horse riders; Perception of Highland wildlife and scenery adds to feeling of remoteness; WIAT opportunities. 	<ul style="list-style-type: none"> Access to the main forest entrance is to an extent difficult from all directions ie secondary road. In particular the Tak-Ma-Doon road via Kilsyth is single carriageway and has several sight line visibility issues – which would prevent the promotion of direct access from North Lanarkshire to any large-scale mountain bike facilities developed at Carron; Car park is in a poor state and unacceptable to visitor demands but is currently being improved by FCS; Emphasis / aspirations of some public sector bodies (within the Stirling / Trossachs area) is with the Aberfoyle site and not Carron Valley; The Carron Valley Development Group have failed (although not through want of trying) to attract other interest groups / community representation to the development group; There are wider concerns that the Carron Valley development group will not continue to take the lead with the future recreation of Carron Valley once mountain biking trails have been suitably developed; Soil conditions are rather difficult for trail construction in places; The forest structure is rather monotonous; The environment around the reservoir is pleasant but, the good panoramic views are really only secured once height is gained; Carron Valley has limited immediate tourism visitor infrastructure and this is unlikely to change in the future; Carron Valley is not a recognised tourism destination. 	<ul style="list-style-type: none"> Sled Dog Racing and Husky Dog trials are held frequently at Carron Valley; Demand for horse riding was identified. All routes are standard forestry track surface. Includes a popular 9½ miles circular route; As yet no water sports, although there is an indigenous wild brown trout population on the reservoir which provides some of the best fly fishing in Scotland; A plethora of woodland trails / forest road networks and well-known walks predominately around the Meikle Bin / Little Bin and Gartcarron Hill. 	<ul style="list-style-type: none"> Will fit with the North Lanarkshire Tourism Action Plan. Potential to become a key visitor activity / driver for the area, and help expand tourism benefits to the Lanarkshire and Stirling economies; Offers the Central Belt population an easily accessible facility 'on their door step' ie easy for afternoon / night trips; Socially inclusive project with good opportunity to link with local Stirlingshire / North Lanarkshire schools. Gives opportunity for introduction to the sport as well as health benefits for youngsters in the surrounding area; Mountain bike trails would be supported / used by 'Sports Secondaries' re North Lanarkshire / Stirling sports development and active health strategies. It will allow students to try the sport on a formally created trail, in a car free environment; Opportunity to build on the Carron Valley Development Group further and join with other health / socially and recreational focused groups; Opportunity to improve quality of life, health and fitness of families and children in the surrounding area; Catalyst for more investment in the regeneration of Carron Valley. 	<ul style="list-style-type: none"> Day visitor from immediate local North Lanarkshire and Stirling communities; Schools and educational / youth groups; Bike clubs and alternative recreational markets re walking, horse riding and links to water-based activities ie fishing; Social inclusion / health / inactivity and anti-social behaviour markets; Day visitor market – significant population within a ¾-1 hour drive time away ie Glasgow / Edinburgh and Stirling, the three main population centres in Central Scotland; Visitor markets and overnight-related markets considered minimal at this stage; due to the lack of sufficient visitor infrastructure and Carron Valley not a tourist destination; Opportunity to link the Medieval Fort and mountain biking markets ie children / educational markets and young families; Good night riding opportunities and half-day excursion venue opportunity; Attractive for VFR market; Opportunity to attract wider market base and wide range of skills levels; Provide the visitor with a range of integrated recreation facilities.

SCOTTISH LOWLANDS FOREST DISTRICT							
Reference Area	Forest Characteristics	Forest Cycling Development History	Strengths	Weaknesses	Existing Forest and Recreation and Wider Tourism Infrastructure Provisions	Wider Benefits	Market Opportunities
Arran Focus							
Sannox	<ul style="list-style-type: none"> The forest is just off the A841 and located about 1 mile North of the village of Sannox; The forest itself is a small attractive conifer woodland and is situated on the picturesque North-East coast of Arran; It offers several vantage points, with spectacular views onto the hills and glens of Northern Arran; The village of Sannox offers a wide crescent shaped sandy beach and a 9-hole golf course set among the foothills of Glen Rosa – a popular walking destination; The forest car park adjoins the beach and there is a children's play area. 	<ul style="list-style-type: none"> There are currently no single track cycle routes from Sannox, however there are a number of mapped mountain bike trails around the Sannox area including, the North Sannox route a 2½ miles trail, suitable for children, and the Sannox Glen a 1 mile stretch of track suitable for older children cycling. 	<ul style="list-style-type: none"> Good views of Goatfell; Attractive coastal views; A small forest well used by locals and tourists; Potential as part of 'round Island' off-road cycle route. 	<ul style="list-style-type: none"> Small isolated / remote forest; Limited development opportunity; No links to other forest areas; There are potential user conflicts in the forest. 	<ul style="list-style-type: none"> North Sannox picnic and car park area is accessible to all. Also includes toilets; The adjacent North Sannox trekking centre uses the forest for one to two hours treks as and when required; Glen Rosa is a popular walking destination. 	<ul style="list-style-type: none"> The forest continues to serve as an important access point for local people and visitors; Provides gentle and attractive cycling facilities in the North of the Island and helps to strengthen / promote the cycling brand of Arran; The forest does not link with any other forests, thus wider spin-offs / linkages are limited. 	<ul style="list-style-type: none"> No real purpose-built single track cycling market opportunity as forest is too limited and too many user conflicts; Attractive to families and children; Existing users; Local residents; It is a local forest site, with two low level bike trails at present; Provides an alternative route for people on the National Cycle Network ie Sannox to Lochranza; Opportunity to link as part of Arran multi-user trail network.
Arran (South) Monamore Glen and Glenashdale	<ul style="list-style-type: none"> Located South of Lamlash on the A84; The forest is rich in natural and archaeological heritage, and includes the Glenashdale Waterfall and "The Giants' Graves" (a group of Neolithic chambered cairns) both of which attract day and overnight visitors; This is a vast forest area linked to Lamlash by forest road. 	<ul style="list-style-type: none"> The forests act as a through route between Lamlash and Kilmory (9 miles); The Glenashdale Link is a 2 miles forest road link from Whiting Bay; Knockenkelly through route is a link from Whiting Bay to Knockenkelly (2 miles); Purpose-built single track development of about 1.5km has been developed by Arran Mountain Bike Club in conjunction with the local FCS as part of through route development from Lamlash to Glenashdale; Footpath link from Brodick to Lamlash can be cycled but is steep and not accessible for all; Further 1.5km of single track link proposed adding to the Lamlash route; Arran bike club are proposing a skills area in Monamore Glen. 	<ul style="list-style-type: none"> Glenashdale Falls are an interesting visitor site, popular with locals and tourists; Good views of Lamlash bay from upper Glenashdale; Development of wooden 'tents' in forest. This is a specific project by Outdoor Resources at North Ayrshire Council and are not open to the general public, only for organised groups led by Council; Points of interest in forest include standing stones, iron age fort, chambered cairns; Various access points to large forest; Large quarries with plenty of stocked mineral for trail building; Forest has good access from Lamlash and Whiting Bay; Off-road footpath links to Lamlash and Brodick albeit very steep can be cycled; Purpose-built trails add interest amongst long forest road sections; Good forest signage; Network of forest roads to be built over next 5 to 15 years. 	<ul style="list-style-type: none"> Spine forest road – single through route only, no circular routes at present; North forest road section from Monamore, 6km rather uninteresting; Forest lacks diversity single forest species, rather boring / green tunnel in sections; Most open moorland above forest is SSSI; Significant future harvesting operations over next five to 10 years – is a busy commercial forest. 	<ul style="list-style-type: none"> Glenashdale Falls walk (4km) is one of the most attractive and spectacular walks on the Island and attracts over 25,000 visitors each year; Recreation at the Ashdale bridge includes a footpath along the Glenashdale burn and the Giant Graves walk which is a 80 minutes, 2 miles loop which includes historical and education features re remains of chambered cairns; There are also two popular walking trails in the area. They offer marvellous views and historical features, and are the Lagaville Forest Trail, a 1 hour, 1½ miles trail and the Urie Loch Hill Trail, a 4 hours, 3½ miles route for the more ardent walker; Many cyclists currently cycle the 54 miles around the Island and there is a will to create a circular Island off-road route – see network of multi-user trails. 	<ul style="list-style-type: none"> Improved routes will help the village of Lamlash to benefit from cycling-related economic activity linkages; VisitScotland are keen to move visitor spending around the whole of the Isle of Arran – this fits with the strategy and this would help benefit Arran's smaller towns and villages; Stimulate local / community involvement – opportunity for social, health and local school youth benefits as a result; In the long run there are opportunities for local businesses to provide supporting facilities and opportunity to create additional economic benefit from a wider range of activities. 	<ul style="list-style-type: none"> Forest cycling for older people and older families; Continue to grow volunteer base and support local bike club enthusiasm; see addition of strategic sections of single track to add interest; Visitor / overnight market looking for alternative trails facilities; Activity youth group / community opportunities; Local schools; Activity market opportunities (see Arran Adventure).

SCOTTISH LOWLANDS FOREST DISTRICT							
Reference Area	Forest Characteristics	Forest Cycling Development History	Strengths	Weaknesses	Existing Forest and Recreation and Wider Tourism Infrastructure Provisions	Wider Benefits	Market Opportunities
Arran Focus							
Arran (West) Blackwaterfoot	<ul style="list-style-type: none"> The West coast of Arran is less developed than the East, and the largest settlement is the small attractive fishing village of Blackwaterfoot overlooking Drumnadoon Bay; Offers great views out to Kilbrannan Sound to the Mull of Kintyre; The forest is located North of Blackwaterfoot village on the A841; There are two access points. 	<ul style="list-style-type: none"> Limited existing forest road network and no single track cycle development as yet; Closest off-road link is the Clauchan Link which is a 2 hours, 5 miles cycle from Shiskine Cemy to Glenree; There are three road cycling routes in the area including the North / South Circulars and the Machrie Moor. 	<ul style="list-style-type: none"> Near Blackwaterfoot West of Island adding to visitor tourist focus product; Well-known village of Blackwaterfoot attracts visitors from the more popular East coast of Arran; Scenic views overlooking the Kintyre peninsula. 	<ul style="list-style-type: none"> Very limited existing forest road network; Clauchan glen very steep sided 'gorge like' river; Small forest area; Forest lacks diversity (single species); Limited views, green tunnel throughout. 	<ul style="list-style-type: none"> The King's Cave forest trail is a 2½ hours, 2 miles green marked walk starting from the Torr Righ car park; 5 miles forest path links Clauchan Glen to Sliddery water. 	<ul style="list-style-type: none"> Round Island off-road route would improve safety benefits for everyone cycling Arran. Has become particularly unsafe in recent years – development of these longer routes would cure these concerns and help stimulate economic benefit around the Island; Opportunity to promote a new tourism product in Arran, currently synonymous with road cycling; Would help attract wider tourism market and also help pool cyclists / visitors away from the more traditional activities re walking and golfing; Opportunity to build overnight and short break markets. 	<ul style="list-style-type: none"> Excursionists; Day and overnight visitors; Keen cyclists hoping to cycle circular Island route off-road, instead of the present on-road – it is a long-term 15 year objective; No real short-term opportunities for this forest, longer term as part of link.
Brodick Castle	<ul style="list-style-type: none"> This red sandstone castle owned by the National Trust for Scotland nestles in dark trees at the foot of Goatfell, 1½ miles out of Brodick on the A841. The Castle attracts 36,610 visitors per year and Brodick Country Park 53,585 (2004); The Forest is part of Brodick Country Park and forms the backdrop to the Castle with the summit of Goatfell, at 2,866 feet, looming majestically above. The park also includes waymarked trails for walkers, woodlands, waterfalls, gorges, wildlife ponds, a nature room and wildlife garden for children; These woodlands are owned by both FCS and National Trust for Scotland and offer a variety of interlinking paths trails and cycling loops on forest roads path and trails. 	<ul style="list-style-type: none"> Brodick Castle 10km circular route (see Clauchland Hills); Current trails linked to waymarked forest cycle roads. It is also the site of the Trailquest route, which is proving very popular with groups re Brodick Castle route and Trailquest, a 1-2 hours, 6 miles easy graded cycle route using existing forest roads paths and tracks; Glen Rosa is a 2½ miles moderate graded cycle route from Glen Rosa to Garbh Allt waterfalls and is ideal for older children. 	<ul style="list-style-type: none"> Existing signed cycle trails; Existing visitor infrastructure / Brodick Castle; Restaurant; Plenty of car parking; Successful Trailquest site. 	<ul style="list-style-type: none"> Small forest area; Part of country park and woodland trail; Part of trail shared with Goatfell ascent can cause user conflict; Limited expansion opportunities; Constrained due to National Trust for Scotland Brodick Castle; Large number of visitors adding user conflict; Existing routes signed but need refreshed. 	<ul style="list-style-type: none"> Brodick Castle car park and Cladach car park are the two entrances to the woodlands; from the car parks there are two popular walking routes, a 1½ hours, 2½ miles trail and a 2 hours, 3 miles trail; Brodick Castle visitor centre includes a ranger service, nature trail / wheelchair access, tearoom, shop, woodland walks and an adventure playground; Signed cycle routes in this area benefit from visitor usage. 	<ul style="list-style-type: none"> Economic spin-off re café and restaurant; Marketing profile of National Trust for Scotland Brodick; Brodick Castle – provides consumers / cyclists with more choice / flexibility. Additional cycling facilities adds to the product and to the critical mass of visitor to Brodick Castle; The Trailquest product is proving successful for private business (see Arran Adventure). 	<ul style="list-style-type: none"> Existing users; Attractive to families and children re Trailquest and leisure cycling (see Arran Adventure); Increase number of local users with strategic links to Brodick and promotion of routes to local community; Groups, youth organisations and activity markets re Trailquest product / off-Island markets looking for activities; Overnight visitor market; All cyclists – alternative provision to road cycling; Walkers – who want to cycle; Strategic link to National Trust for Scotland visitors – Brodick Castle.

SCOTTISH LOWLANDS FOREST DISTRICT							
Reference Area	Forest Characteristics	Forest Cycling Development History	Strengths	Weaknesses	Existing Forest and Recreation and Wider Tourism Infrastructure Provisions	Wider Benefits	Market Opportunities
Arran Focus							
Brodick (Central) Clachland Hills	<ul style="list-style-type: none"> The forest is the closest to the Island's main population centre. Access to the Brodick forest is predominately via the Cnoc Na Dail car park; The forest is a mix of Conifer trees and bracken-covered hillsides, footpaths, with some fabulous views of Lamlash and Holy Island as well as great views North to Goatfell. 	<ul style="list-style-type: none"> Currently developing cycling routes. Routes have been formed and signed by linking forest roads, single track and other routes together – see Brodick Castle 10km route. Brodick / Lamlash / Glenashdale – Brodick Circular, Clachland Hills (red grade route). It is a community-led effort between FCS, Arran Bike Club and Arran Adventure a commercial run outdoor centre; There are already existing forest road cycle trails in this forest area including, The Letter, a 2 miles trail from Cnoc Na Dial Forest car park to Lamlash village; Clachland Forest, a 3 miles trail on single track from Cnoc Na Dial Forest car park to Corriegills. The Fairy Glen 'in and around' a 2 miles trail from Brodick to Cnoc Na Dial Forest car park and the Glen Cloy trail, a 2 miles trail from Cnoc Na Dial Forest car park to Glen Cloy. 	<ul style="list-style-type: none"> Good links to Brodick; Brodick part of circular route around Arran; Fantastic views of Goatfell; Very easy to cycle direct from ferry to forest; Arran bike club keen to build trails already put in bridges and contour trail; Only single track cycle route currently on Island; Trails utilised by walkers and horse rides; Cycling trails becoming known and marketed by word of mouth and the cycle press; Forest will be part of an extensive planned Trailquest network (see Arran Adventure); Youth groups off Island – currently visiting for cycling (re Arran Adventure); Diversity of terrain and forest structure adds interest; Archaeological Iron Age features include standing stones, hill fort and chambered cairns. 	<ul style="list-style-type: none"> No signage for cycling at present; Trail wet and eroding in places; Trail difficult to follow in woodland; River crossing needs improvement; Path culverts not cycling orientated; Route may be difficult for family market; Possibility of visitor pressure with walkers; Trail sustainability questionable. 	<ul style="list-style-type: none"> Arran Adventure – a private company offer many linked activity / recreational services for visitors including Glencloy Adventure Park, Gorge Walking, Kayaking, and Abseiling etc; There are two main walking routes which also begin from the Cnoc Na Dail car park. The Clachland Hills a 1½ hours, 2½ miles red graded walk to a group of standing stones and The Glencloy walk which is a 2 hours, 4 miles red graded walk; There is also strong use of these forest networks by horse riders. 	<ul style="list-style-type: none"> Safety benefits by providing more off-road cycling; Access will offer health benefits to local enthusiasts as well as tourist ie routes will be user-friendly to people of all ages; Opportunity to promote / increase the recreational activities and tourism potential of Arran ie safe secure off-road cycling. Would have an economic impact on surrounding business; Private / commercial benefits from increased demand re more Trailquest / mountain bike hire usage; Other secondary villages on Arran would also benefit from increased visitor usage and key links via multi-user trails and 'round Island' off-road trails. 	<ul style="list-style-type: none"> Continue to build on community cycle club-driven demand / aspirations for cycling single track; Opportunity to link to extended Trailquest re youth groups, outdoor activity type market (see Arran Adventure); Attractive to all markets including families and children; Promote activity weekend / short break market; Attractive to outdoor activity market; Enthusiast market; Off season / shoulder season market opportunity.

SCOTTISH LOWLANDS FOREST DISTRICT							
Reference Area	Forest Characteristics	Forest Cycling Development History	Strengths	Weaknesses	Existing Forest and Recreation and Wider Tourism Infrastructure Provisions	Wider Benefits	Market Opportunities
Fauldhouse Focus							
Fauldhouse	<ul style="list-style-type: none"> A large part of this forest has been felled and is currently being replanted; This is a production forest of mainly sitka spruce and larch; The terrain is relatively flat undulating rather than steep and dramatic; There is a high proportion of peaty soils and as a result the terrain is rather wet and there are drainage issues; Adjacent to the forest site are large quantities of mining waste material which (subject to satisfactory testing for contaminants) could easily be transported for trail use; Natural mineral appears to be deep underground in places which would make 'as dug' trails difficult, expensive; The forest areas are relatively small, lack a comprehensive forest road network. 	<ul style="list-style-type: none"> No cycling at present; Few forest roads for cycle development; Evidence of some informal cycling in forest – although mainly motorised. 	<ul style="list-style-type: none"> Central location in Scotland results in high local resident catchment population; This forest will be very accessible to a wider local population in future due to proposed new M8 Motorway junction; Piloted forest schools programme – Woodlands In and Around Towns Initiative (WIAT), excellent educational resource; Redevelopment of open cast mining offers other recreation facilities such as golf which will add to the visitor draw of the area; Dedicated, well-respected forest rangers Building of new homes will result in growing local population which could use forest as recreation resource; The Heartland project will add some tourism element to the area: hotel and golf course; On a clear day this forest offers panoramic views, to Edinburgh in the East, Ben Ledi and the Southern Highlands to the North; The 'conical bing' is a signature feature for this forest; The forest could become an integral part of a major regeneration scheme; Local Authority keen to develop recreation infrastructure to encourage use of wider countryside including the forest. 	<ul style="list-style-type: none"> The village of Fauldhouse has negative connotations for the local / Edinburgh market; The terrain is rather flat and the forest structure uninteresting; The forest is not supported by a tourist destination and lacks tourist / visitor infrastructure ie accommodation, café, restaurant, entertainment, other activities etc; The soil is very peaty and ground wet which will add to trail building costs and long-term sustainability issues; At present there is no grassroots community youth group or bike club driving forward the potential cycle developments; The open cast mine will remain operational for another 10 years; The forest is rather isolated, there are no links at present to other recreational offering; The forest road network is limited and in a poor state of repair – all trails would have to be created adding to the trail development cost; Apart from the 'conical bing' the forest lacks interesting or defining features for the visitor ie archaeology, geology, wildlife etc; No long-distance cycle routes / Epics or Sustrans routes traverse the forest; Would compete directly with Glentress and Blairadam for local resident cycle market ie significant local catchment overlap of one-hour drive time postcodes; No toilets – major problem for local primary school excursions; Continued abuse by motorbikers of existing trails and tracks will significantly hamper any mountain bike trail development. 	<ul style="list-style-type: none"> Recreation in this 'young' forest is limited to dog walking, local walkers, some evidence of informal cycling; The area lacks cycle through route so at present there are no strategic links; The area does not have a tourist visitor infrastructure, it is not a tourism destination; Opportunity to promote Fauldhouse on back of WIAT. 	<ul style="list-style-type: none"> Recognised as an asset to the local area; Enhancing learning and teaching of local kids; Impact on forest welfare ie less vandalism / burnt-out cars; Forest schools initiative Run programmes with local primary schools, recreational, social and educational benefits to all; Recognised as part of Local Authority curriculum. 	<ul style="list-style-type: none"> Potential to attract an expanding local resident population; Opportunity to benefit from visitors to local friends and relatives; Possibility to link with local schools, youths etc re cycle education and social inclusion markets – promoting health benefits etc; Opportunity to establish or serve to attract local cycle enthusiasts if group can be established; Limited opportunity to attract day visitors from wider a field or overnight visitors – due to lack of tourism / visitor destination credentials; The Heartland project may result in some limited overnight visitor opportunities; If Bathgate to Airdrie railway reopens on current Sustrans route, there may be scope to reroute the trail through Polkemmet / Fauldhouse.

D2 STRATEGIC POSITIONING AND TARGET MARKETS – SCOTTISH LOWLANDS FORESTS

D2.1 Introduction

Continuing on from the review and appraisal of each forest area as detailed in Section D1, the consultants now present a summary of the recommended strategic positioning and target markets for each forest cycling loci currently under consideration in Scottish Lowlands.

D2.2 Strategic Positioning

The strategic positioning of a future purpose-built centre in Scottish Lowlands has been considered against the development criteria as outlined in Section 5 of this report. The strategic positioning reflects an indication of the market potential, likely level of economic benefit re local, regional and national impacts, and the scale of product development, links to infrastructure and wider tourism destinations. In the case of Arran, the consultants have grouped one or more forests together, where for positioning and critical mass purposes the destination / development reflects more than simply one forest area. The consultants' positioning conclusions for each forest within the district are provided as follows.

SCOTTISH LOWLANDS FOREST DISTRICT – STRATEGIC MARKET AND PRODUCT POSITIONING							
	Local Centre			Regional Centre	National Centre	Cycle Through Route	Conclusion on Positioning Opportunity
	Type A Volunteer Enthusiasts	Type B Wider Access / Inclusion For All	Type C Tourism				
Kelty Focus							
Blairadam	<ul style="list-style-type: none"> Large-scale and fairly successful cycle / mountain bike club; Very enthusiastic and actively seeks to develop trails. 	<ul style="list-style-type: none"> Good and growing social inclusion credentials; Accessible to all; Management issues re walkers / horse riding; Links to outdoor activity centre re social / education access / benefits. Fife Council and Active Steps initiatives. 	<ul style="list-style-type: none"> Limited tourism-related development potential; Not a visitor destination. 	<ul style="list-style-type: none"> Regional aspirations due to significant population catchment and local enthusiasm; However large-scale development opportunities are limited due to visitor destination appeal etc; Regional aspirations due to significant population have been downsized and are now more pragmatic. 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Links to Kingdom of Fife Millennium Cycleway Campaign which passes through the forest; National Cycle Network Route dissects forest. 	<ul style="list-style-type: none"> Local facility Types B and C with strategic links.
Stirling Focus							
Carron Valley	<ul style="list-style-type: none"> Carron Valley Community Development Group formed. Very professional and organised group. (A benchmark for other would be cycle / local recreational development groups); Enthusiastic and actively developing trails on the back of secured funding now needs to engage with wider users. 	<ul style="list-style-type: none"> Accessible to all; Limited social inclusion opportunities at present due to access, scenic landscape and market awareness of Carron Valley; Need to grow social inclusion elements of development considerably; Become local recreational centre for walking / cycling / horse riding. 	<ul style="list-style-type: none"> Access is difficult; More limited tourism ie overnight visitor opportunity; Good day visitor opportunity; Large population within a one-hour drive is a major factor. 	<ul style="list-style-type: none"> Local facility – with limited tourism / economic opportunity; Not visitor destination. 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> No identified cycle through routes; Link to other recreation around the Loch. 	<ul style="list-style-type: none"> Local facility Types A and B with some limited tourism potential.
Arran Focus							
Brodick / Clauchland Hills and Glenashdale	<ul style="list-style-type: none"> Local / community / cycle club aspiration for development; Possible to build on community cycle club enthusiasm. 	<ul style="list-style-type: none"> Access for all ie Brodick main Arran population driver within close proximity / good access; Small-scale community school / youth opportunities. 	<ul style="list-style-type: none"> Regional tourism aspirations; Arran is a renowned tourism destination and cycling a recognised recreational activity; Create overnight / short break cycling market; Good tourism service infrastructure; Link to wider outdoor activity markets possible. 	<ul style="list-style-type: none"> No real regional development opportunity; Has wide market appeal, but all at a local / community development level; Possibility to attract visitors to Arran but more likely to service existing markets. 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Links with Brodick Castle – promoting culture and recreational tourism links to long-term off-road cycling development; Link to cross-Island National Cycle Network. 	<ul style="list-style-type: none"> Local facility Types A, B and C; Strategic links.

SCOTTISH LOWLANDS FOREST DISTRICT – STRATEGIC MARKET AND PRODUCT POSITIONING							
	Local Centre			Regional Centre	National Centre	Cycle Through Route	Conclusion on Positioning Opportunity
	Type A Volunteer Enthusiasts	Type B Wider Access / Inclusion For All	Type C Tourism				
Fauldhouse Focus							
Fauldhouse	<ul style="list-style-type: none"> Currently there is no real evidence of any local groups. Partners should work with community to establish local interest in forest. 	<ul style="list-style-type: none"> Possibility to work with schools / youth workers, groups to establish social inclusion credentials and generate wider benefits. 	<ul style="list-style-type: none"> Limited tourism potential due to lack of wider destination infrastructure; Possibility for some limited VFR demand and some overnight visitor demand created by the Heartland project. 	<ul style="list-style-type: none"> Although good future access forest location and position not regional due to lack of tourism infrastructure, structure of forest, views, facilities etc. 	<ul style="list-style-type: none"> Not applicable 	<ul style="list-style-type: none"> Limited opportunity for links / create links, no local villages / committees etc. 	<ul style="list-style-type: none"> Opportunity for a local centre market-driven by the community and education market; Strategically this is not viewed as visitor destination, it is a local facility. This is a well-focused product aimed at giving local youth fun and developing cycle skills. Dwell time on site will be short.

Based on the strengths and weaknesses analysis and the general market opportunities identified, together with an understanding of the general terrain and forest structure, the following summary tables of cycling target markets have been prepared.

The cycle target markets adopted are those which have been highlighted and defined in Section 4. Each of the forest areas in Scottish Lowlands under study have been considered against the relative / potential strengths of the product which could be developed due to the current level of development, terrain, strategic positioning etc.

TARGET MOUNTAIN BIKE MARKET OPPORTUNITIES							
	Families / Schools / Social Inclusion	Novice	Enthusiast	Cross-Country	Downhill	Events	Freeride
Kelty Focus							
Blairadam	✓✓	✓✓	✓✓	X	X	✓	✓
Stirling Focus							
Carron Valley	✓✓	✓✓	✓✓✓	✓	X	✓	✓
Arran Focus							
Brodick / Clachland Hills and Glenashdale	✓✓	✓✓	✓✓	✓✓	X	✓	✓
Fauldhouse Focus							
Fauldhouse	✓✓	✓✓	✓✓	X	X	X	✓✓

TARGET MARKET SKILL LEVEL				
	Novice	Intermediate	Advanced	Events
Kelty Focus				
Blairadam	Medium	High	Medium	Local Club
Stirling Focus				
Carron Valley	Medium	High	Medium	Local Club
Arran Focus				
Brodick / Clachland Hills and Glenashdale	Medium	High	Medium	Local Club / Island
Fauldhouse Focus				
Fauldhouse	Medium	Low	Medium	X

D2.3 Positioning Summary

- Arran is in itself already a significant recreational road cycling destination and there are target market opportunities in each of the designated mountain bike markets to a greater or lesser extent. Consultants feel that Arran has the best fit to become an off-road cycling destination. There is however the difficulty to add to the Island's recreational provision and improve access to forest cycling on the existing forest road network, strategic links and single track level roads. Arran should be marketed as a forest cycling destination for day visitors and overnight stays. Short and longer cycle excursion routes should be created to help extend and complement Arran's existing recreational offering;
- Carron Valley and Blairadam will appeal to beginners / novices / social inclusion 'type' cycle markets as well as enthusiastic local riders, cycle clubs and visiting friends and relatives. Both these forests should have a range of facilities for the more experienced rider, to satisfy the demand from the current users as well as facilities for lower skill levels, thus ensuring the product suitability complements beginner skill riders ie social inclusion-related initiatives as well as the enthusiast market. They are both recognised as local social / urban focused cycling products – targeting specific urban-related and satisfying predominately local demand markets;
- Fauldhouse is a well-focused product aimed at giving local youth fun and developing cycle skills. Dwell time on site will be short – strategically is not viewed as visitor destination it is a local facility.

D3 PRODUCT DEVELOPMENT AND INDICATIVE TRAIL DEVELOPMENT COSTS – SCOTTISH LOWLANDS FORESTS

Based on research findings, strategic positioning and product market fit analysis, the summary of development conclusions are as follows. Please note all indicative trail capital costs outlined exclude design fees and trail development project management costs. These additional costs usually add about 10%-12% to trail development costs. These costs have been presented in 2005 prices.

However the consultants believe, given existing and planned cycle developments and other forest recreation developments / facilities, that Carron Valley will have a wider appeal and greater opportunity than Blairadam.

TRC have estimated potential trail development costs based on benchmark analysis – as highlighted in Section 8. These costs have been prepared at 2005 prices.

SCOTTISH LOWLANDS FOREST DISTRICT – DEVELOPMENT RECOMMENDATIONS																																															
	Product Opportunities	Product Development and Outline Trail Costs																																													
Arran Focus																																															
Sannox	<ul style="list-style-type: none"> Maintain forest cycling as it has at present no development opportunities; Maintain watching brief, forest may be utilised in future as part of 'round Island' off-road route; Maintain watching brief, forest may be utilised further and linked to Arran multi-user trail network. 	<ul style="list-style-type: none"> None at present. 																																													
Arran (West) Blackwaterfoot	<ul style="list-style-type: none"> No development at this time; Forest may be part of longer-term off-road 'round Island' network. 	<ul style="list-style-type: none"> None at this time. 																																													
Arran (Brodict, Clauchland Hills and Glenashdale)	<ul style="list-style-type: none"> Continue to link into Trailquest product; Ensure short forest road cycle route / links behind Brodict Castle are properly signed / routed etc; Link cycle route to Castle / café etc to offer additional recreation opportunities; Limited product development recommendations but work with partners to better link forest and Castle to Brodict and North of Island re 'off-road' / 'round Island' routes; Improve strategic multi-user / multi-directional trails between Brodict and Lamlash ie make it easier to cycle – key part of Arran multi-user trail network; Support Arran bike club in development of single track route to Glenashdale from Lamlash; Investigate and develop return single track loop from Glenashdale Falls; Improve sustainability of link from trail and Glenashdale Falls to Whiting Bay; Improve Clauchland Hills single track sections and add new loop and links; Investigate appropriate sites for skills loop and fun park products. 	<ul style="list-style-type: none"> Maintain / renew signage on existing routes; Work with partners to identify 'off-road' routes to connect round Island; Developed by volunteers under FCS guidance and control. <table border="1"> <thead> <tr> <th colspan="4">INDICATIVE TRAIL DEVELOPMENT COSTS (BUILT TRAIL LENGTH)</th> </tr> <tr> <th></th> <th>km or Quantity</th> <th>£ per m or £ per unit</th> <th>£</th> </tr> </thead> <tbody> <tr> <td>Improve Lamlash to Brodict routes</td> <td></td> <td></td> <td>30,000</td> </tr> <tr> <td>Completion of outward single track Lamlash to Glenashdale</td> <td>1.5</td> <td>10</td> <td>15,000</td> </tr> <tr> <td>Return single track loop from Glenashdale</td> <td>2</td> <td>10</td> <td>20,000</td> </tr> <tr> <td>Upgrade to existing footpath links</td> <td>2.5</td> <td>10</td> <td>25,000</td> </tr> <tr> <td>Single track on Clauchland Hills loop and links</td> <td>4</td> <td>10</td> <td>40,000</td> </tr> <tr> <td>Skills area</td> <td></td> <td></td> <td>20,000</td> </tr> <tr> <td>Fun park</td> <td></td> <td></td> <td>10,000</td> </tr> <tr> <td>Signage</td> <td>50</td> <td>30</td> <td>1,500</td> </tr> <tr> <td>Trail Development Cost</td> <td></td> <td></td> <td>£161,500</td> </tr> </tbody> </table>		INDICATIVE TRAIL DEVELOPMENT COSTS (BUILT TRAIL LENGTH)					km or Quantity	£ per m or £ per unit	£	Improve Lamlash to Brodict routes			30,000	Completion of outward single track Lamlash to Glenashdale	1.5	10	15,000	Return single track loop from Glenashdale	2	10	20,000	Upgrade to existing footpath links	2.5	10	25,000	Single track on Clauchland Hills loop and links	4	10	40,000	Skills area			20,000	Fun park			10,000	Signage	50	30	1,500	Trail Development Cost			£161,500
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Blairadam	<ul style="list-style-type: none"> The mountain bike market in Scotland at present is dominated by red graded cross-country type riders. In this location however given the high level of community education / outdoor creativity and social inclusion focus, there is a need to also major on the novice / beginner and family cycling market ie multi-user trails, upgraded forest roads and 'green / blue grades'. The forest already has a good network of upgraded forest roads, many which form part of the Kingdom of Fife Millennium Cycleway; This forest however, also needs to satisfy a wide range of users including the Blairadam 'cycle club' which have aspirations at a higher level; The consultants view the future potential of Blairadam as primarily a local forest cycle centre with high education and local enthusiast potential. To satisfy this range of markets a hybrid single track cycle product is recommended to complement the existing forest / millennium cycle routes; Create a multi-user all ability trail with partners incorporate local interpretation, mining heritage, national heritage, art features etc; 	<table border="1"> <thead> <tr> <th colspan="4">INDICATIVE TRAIL DEVELOPMENT COSTS (BUILT TRAIL LENGTH)</th> </tr> <tr> <th></th> <th>km or Quantity</th> <th>£ per m or £ per unit</th> <th>£</th> </tr> </thead> <tbody> <tr> <td>5km to 10km green route with interspersed blue skills loop / obstacle</td> <td>5</td> <td>15</td> <td>75,000</td> </tr> <tr> <td>15km red route linked to previous route with interspersed features black loop feature to shorten overall length</td> <td>8</td> <td>20</td> <td>160,000</td> </tr> <tr> <td>Fun park area</td> <td></td> <td></td> <td>10,000</td> </tr> <tr> <td>Interpreted skills areas – learning focus</td> <td></td> <td></td> <td>17,000</td> </tr> <tr> <td>Signage and trail counters</td> <td>100</td> <td>30</td> <td>3,000</td> </tr> <tr> <td>Total Costs</td> <td></td> <td></td> <td>£265,000</td> </tr> </tbody> </table> <ul style="list-style-type: none"> FCS strategy should be to work closely with community to help reduce these estimated trail development costs utilising volunteer labour etc where appropriate. 		INDICATIVE TRAIL DEVELOPMENT COSTS (BUILT TRAIL LENGTH)					km or Quantity	£ per m or £ per unit	£	5km to 10km green route with interspersed blue skills loop / obstacle	5	15	75,000	15km red route linked to previous route with interspersed features black loop feature to shorten overall length	8	20	160,000	Fun park area			10,000	Interpreted skills areas – learning focus			17,000	Signage and trail counters	100	30	3,000	Total Costs			£265,000												
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Blairadam (Cont'd)	<ul style="list-style-type: none"> Develop a 5km to 10km 'green graded' single track cycle route with 2km to 3km integral sections of blue graded loops, climbs, descended, burn drops etc ie there is always a (green) alternative around blue sections. This will prove to be a good education / learning, skills resource – and also be attractive to families / older cyclists etc. The route however must be clearly signed and interpreted; A 15km red graded trail with 3km to 4km of black graded loop, climbs, jumps, drop-offs etc; A fun park area for younger enthusiasts; Toilets, bike wash and shelter area. It has been assumed that FCS would work with the community group and help bike clubs with trails development and management. 																																																														
Stirling Focus																																																															
Carron Valley	<p>Carron Valley is ultimately a day visitor and not an overnight tourist-driven cycle destination, particularly when it has to compete in the future with the likes of Loch Lomond and the Trossachs, Witch's and Wolfrax Trails, and all points North and South (see 7stanes); What is unique about Carron Valley is its central location and its situation / access to high numbers of local / Central Scotland residents albeit that visitor access to the forest is along minor roads. The road access of other forests in the Central Belt – Blairadam and Fauldhouse is significantly easier than Carron Valley. There is however a real opportunity to position Carron Valley as a key local cycling resource which will attract day visitors, night riders, educational and social inclusion markets. Linking the Duncarron Fort together with a cycling product will help to increase the tourism credentials particularly in the VFR market of what will still largely be a very good community forest resource. It is recommended that the following purpose-built single track cycle development is progressed to support and complement the merging national and regional 'off-road' cycle products across Scotland.</p> <ul style="list-style-type: none"> Develop a network of blue and red cross-country trails in the short to medium term; Create and sign a low level route round Carron Valley reservoir, build a route of approximately 15km – 3km still needs to be completed; Create a short 5km route using existing forest – roads and purpose-built single track aimed at families and other users – green trail multi-user; Develop single central facilities for cycle and fort visitors include toilets, café, changing and shelter facilities. Development should incorporate FCS office external car park to accommodate mountain bikers / cyclists East of existing FCS office. (Note: this should be a single integrated facility and not a range of separate facilities for different markets / users); Develop an intermediate-based skills area for learning purposes, linked to outdoor education / lifelong learning / social inclusion; Consider introduction in the longer term of a cross-country black route incorporating Tomtain. 	<ul style="list-style-type: none"> Trail development costs at Carron Valley could be higher than average due to 'peaty' soil conditions if not carefully planned – routes will have to be carefully chosen and well arranged. Currently about 4km of built single track cycle trails being built for £74,000 which equates to about £18m (including design fees). 	<table border="1"> <thead> <tr> <th colspan="4">INDICATIVE TRAIL DEVELOPMENT COSTS (BUILT TRAILS)</th> </tr> <tr> <th>Phase I</th> <th>km</th> <th>£ per m</th> <th>£</th> </tr> </thead> <tbody> <tr> <td>Complete 10km route upgraded multi-user loop round reservoir</td> <td></td> <td></td> <td>30,000</td> </tr> <tr> <td>Multi-user green trail</td> <td>2</td> <td>15</td> <td>30,000</td> </tr> <tr> <td>Network blue and red trail loops</td> <td>5</td> <td>20</td> <td>100,000</td> </tr> <tr> <td>Education and interpretation skills areas (see Glentress – Kirroughtree)</td> <td></td> <td></td> <td>20,000</td> </tr> <tr> <td colspan="3">Phase I Development Costs</td> <td>£180,000</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="4">INDICATIVE TRAIL DEVELOPMENT COSTS (BUILT TRAILS)</th> </tr> <tr> <th>Phase II</th> <th>km or Quantity</th> <th>£ per m or £ per unit</th> <th>£</th> </tr> </thead> <tbody> <tr> <td>Add to network of blue / red trails / loops continued</td> <td>4</td> <td>20</td> <td>80,000</td> </tr> <tr> <td>Tomtain black route</td> <td>6</td> <td>20</td> <td>120,000</td> </tr> <tr> <td>Phase II development costs</td> <td></td> <td></td> <td>200,000</td> </tr> <tr> <td>Signs</td> <td>100</td> <td>30</td> <td>3,000</td> </tr> <tr> <td>Trail counters</td> <td></td> <td></td> <td>3,000</td> </tr> <tr> <td colspan="3">Phase II Development Costs</td> <td>£406,000</td> </tr> </tbody> </table>	INDICATIVE TRAIL DEVELOPMENT COSTS (BUILT TRAILS)				Phase I	km	£ per m	£	Complete 10km route upgraded multi-user loop round reservoir			30,000	Multi-user green trail	2	15	30,000	Network blue and red trail loops	5	20	100,000	Education and interpretation skills areas (see Glentress – Kirroughtree)			20,000	Phase I Development Costs			£180,000	INDICATIVE TRAIL DEVELOPMENT COSTS (BUILT TRAILS)				Phase II	km or Quantity	£ per m or £ per unit	£	Add to network of blue / red trails / loops continued	4	20	80,000	Tomtain black route	6	20	120,000	Phase II development costs			200,000	Signs	100	30	3,000	Trail counters			3,000	Phase II Development Costs			£406,000
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SCOTTISH LOWLANDS FOREST DISTRICT – DEVELOPMENT RECOMMENDATIONS		
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Stirling Focus		
Carron Valley (Cont'd)	<p><u>Note:</u> Existing fun park products are currently graded 'blue' ie blue grade if cycled slowly. These are not really blue routes as 'air' can easily occur over jumps and berms have to be aggressively cycled. Fun parks are really 'freeride' areas and as a result, the consultants believe, should not have a blue cross-country grading. This means that where these routes are integral to trail descents, alternative blue routes may have to be constructed. The red level cross-country rider however should be able to safely negotiate a 'freeride' fun park model (see grading section). It is envisaged that Carron Valley will grow organically as funding is secured by the Carron Valley Development Group. The Carron Valley Development Group are the project champions and the focus will have to be widened in the future to meet wider community recreation objectives ie to ensure multi-user trail access. Carron Valley needs to differentiate its trails if it is to succeed. It is envisaged that the Carron Valley project may not be developed on the three stacked loop trail system [see International Mountain Bike Association (IMBA) guidelines] but an innovative and fully pledged sustainable network trail system in a focused area should be developed. The emphasis is not on long-distance cross-country trails but shorter more intensive 'fun'-style trails and loops which promote a short stay / half-day or night riding experience (see current Laggan Wolfrax or Learnie product blue, red and fun park). The venue will be used to educate and grow rider skills before tackling the National Centres at Peebles / Trossachs / Fort William. All trails would interlink ie green / blue / red / black to join together to give longer routes of the desired grade ie red route would have its own dedicated sections but also utilise green and blue network to create longer route. An alternative approach may be to adopt the same suggested development strategy for Carron Valley as Blairadam where alternative higher graded loops and obstacles are visited along one key route ie red and black alternative sections / loops visited off blue route (see Kirroughtree Bruntis / Dounehill sections or Airs Rock Laggan Wolfrax). It is very important therefore when considering future development of Carron Valley that a full concept design master plan is evolved and a working plan adopted for all phases. Future trail development should work to a designed plan and not be added on just an ad hoc basis as and when future funding is found.</p>	

SCOTTISH LOWLANDS FOREST DISTRICT – DEVELOPMENT RECOMMENDATIONS																																							
Fauldhouse Focus	Product Opportunities	Product Development and Outline Trail Costs																																					
<p>Fauldhouse</p>	<ul style="list-style-type: none"> • Opportunity to create a short entry novice trail aimed at local residents, schools etc; • FCS should not drive this project, it should be driven by the community under the WIAT Grant Scheme; • If enthusiasts / bike club / youth group emerges there is an opportunity to introduce a freeride / fun park area aimed at local kids – with berms / jumps etc. <p>This should essentially be a blue trail with additional obstacles at blue and red levels along the route.</p> <p>The features would be interpreted to allow skills development – essentially this would be viewed as a skills trail.</p> <p>There may be an opportunity to develop a North Shore development at Fauldhouse and a trials area (see John Ireland, Glen Urquhart).</p> <p>This should be done in conjunction with local community and risk assessment liability and maintenance issues would have to be carried out.</p> <p>The consultants are of the opinion that these cycle products could easily be developed in a country park / and urban park type environment and do not necessarily need a forest area.</p> <p>Even with the proposed Heartland development which includes hotel and golf course, the consultants do not view this cycle development as a strategic tourism development for FCS but may have a strong local importance.</p> <p>These facilities would benefit from direct links to local residents where the youth can cycle safely to and from home.</p> <p><u>Note:</u> Consultants note that conflicts between a short entry / novice trail development and existing motorised vehicle / trial bike usage on FCS land must be resolved before a sustainable / workable and cycle-friendly trail is developed. Conflicts / issues with motorised vehicles using the forest must be settled via control, conviction and FCS management systems. Only then can future mountain bike trails / skills area be developed re safety, sustainability and access etc. Local community development groups / partners must work to ensure conflict resolution.</p>	<table border="1"> <thead> <tr> <th colspan="4">INDICATIVE TRAIL DEVELOPMENT COSTS (BUILT TRAILS)</th> </tr> <tr> <th>Phase I</th> <th>km</th> <th>£ per m</th> <th>£</th> </tr> </thead> <tbody> <tr> <td>3-5km blue single track (work with schools etc)</td> <td>3-5</td> <td>20</td> <td>60,000-100,000</td> </tr> <tr> <td>Large freeride area (community aspiration must be identified before proceeding)</td> <td></td> <td></td> <td>20,000</td> </tr> <tr> <td colspan="3">Phase I Development Costs</td> <td>£80,000-£120,000</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="4">INDICATIVE TRAIL DEVELOPMENT COSTS (BUILT TRAILS)</th> </tr> <tr> <th>Phase II (Only to be developed once success of Phase I has been proven)</th> <th>km</th> <th>£ per m</th> <th>£</th> </tr> </thead> <tbody> <tr> <td>North Shore, skills and dirt ride area needs to be fully scoped and worked up with community (needs market testing)</td> <td></td> <td></td> <td>Circa 30,000-50,000</td> </tr> <tr> <td colspan="3">Phase II Development Costs</td> <td>£30,000-£50,000</td> </tr> </tbody> </table> <p>Note: Not a strategic tourism development. Must be developed with community.</p>		INDICATIVE TRAIL DEVELOPMENT COSTS (BUILT TRAILS)				Phase I	km	£ per m	£	3-5km blue single track (work with schools etc)	3-5	20	60,000-100,000	Large freeride area (community aspiration must be identified before proceeding)			20,000	Phase I Development Costs			£80,000-£120,000	INDICATIVE TRAIL DEVELOPMENT COSTS (BUILT TRAILS)				Phase II (Only to be developed once success of Phase I has been proven)	km	£ per m	£	North Shore, skills and dirt ride area needs to be fully scoped and worked up with community (needs market testing)			Circa 30,000-50,000	Phase II Development Costs			£30,000-£50,000
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D4 ESTIMATE OF TRAIL USAGE – SCOTTISH LOWLANDS FORESTS

D4.1 Introduction

In this section we have quantified likely trail usage numbers / patterns for each individual forest recommended for mountain bike single track / purpose-built development in Scottish Lowlands.

As part of our method of calculation, the consultants have quantified the size of the local resident population within a one-hour drive time of the key population centres in Scotland (see Section 6). From this, a calculation of the people who actively participate in mountain biking as a sport and the potential number of mountain bike trips a year generated by local residents have been estimated. This has been used as a cross-check to enable us to verify our projections.

At this time the consultants have only developed a cross-check model for Central Scotland local resident population. This covers cycle developments at: Glentress, Carron Valley, Blairadam, Queen Elizabeth Forest Park, Ardgartan, and Craigvinean Forests. It is estimated that the total local resident trips to these forests as quantified by TRC equates to about only 22% of all the mountain bike trips generated by the Central Scotland local resident population. In our opinion our quantification for individual forests by local Central Belt visitors is realistic.

Research has revealed that cycle routes which are located close to a person's residence ie a local centre will be used much more often (many more repeat visits) than those located further away. Visits to national and regional centres will also occur, but as more organised or formal cycle trips throughout the year. These types of issues have all been considered and weighted against our own penetration rate analysis detailed in the following section.

What must be borne in mind is that each regional centre will also be a local centre for some of the local resident market, although in general, day visitors will be prepared to travel up to about two hours to visit an attraction / carry out a recreation activity and even more if the attraction is unique (one of a kind ie see Glentress experience). We believe it is more prudent as more single track cycle venues are developed across Scotland that each is assessed on its ability to attract a local population or tourist market from only a one-hour drive time. This will avoid and limit the issue of market overlap and displacement. The number of potential visitors to each forest site has therefore been quantified on this basis.

D4.2 The Penetration Criteria

As part of our isochrone analysis methodology TRC consultants have applied a penetration percentage to each individual forest site, based on its likelihood / potential market share. The penetration model has been applied to local resident, day visitor and both UK and overseas overnight tourist markets.

Every tourist or leisure facility, whether it be swimming pool, cinema or visitor attraction penetrates its market to a greater or lesser degree. The level of penetration applied will depend upon a whole host of tangible differences / variances re quality of attraction, reputation of attraction, facilities offered by attraction etc. In other words an established / quality product will penetrate its market potential much more than a similar product with more limited market appeal. Indeed, in mountain biking terms, Glentress has a high penetration level for the day visitor markets and this is a direct result of its 'fit' with the markets demands / requirements ie product quality, scale of development, access, brand, proximity to Edinburgh and the North of England markets, and central facilities (ie the Hub, now with separate brand 'the Hub in the Forest'). It is these positive factors which give Glentress such a high penetration rate / flex of the day visitor market.

A breakdown of the penetration ‘influences’ used to calculate trail usage patterns are detailed below.

PENETRATION RATE – ‘INFLUENCES’	
Type	Description
Destination	- Overall strength as a visitor / tourist destination, level of appeal / impression / reputation, etc;
Captive Market	- Loci, level of competition in area, level of difficulty in attracting market, distance to next venue, degree of other / linked recreation experiences in the area;
Tourism Infrastructure	- The cluster effect ie level of wider market offering – tourism / recreation, services facilities re accommodation, brand etc holistic / interlinked v fragmented;
Transport / Access	- Level of supporting transport infrastructure / appeal as an access destination ie easy access v remote. Public transport links;
Linkages	- Links to other tourism / service facilities in the wider area re food and drink / accommodation, visitor attractions, activity provisions etc;
Day / Half-Day Experience	- Value / length of stay / other facilities, linkages to other similar facilities / critical mass opportunities / synergy;
Distance From Market	- Loci / transport / convenience / population catchment, access to markets;
Urban and Rural	- Appeal / remoteness / attractiveness, access;
Overnight Potential	- Economic impact – high / low level benefits;
Accommodation Potential	- Product quality, offering, suitability, price;
Product	- Scale, size, quality / differentiation / appeal / range of developments;
Market	- Scale, size, shape, dynamics;
Skill Level of Market	- Requirements / linkages / facilities;
Breadth of Market	- Appeal / number of different target markets / growth opportunity, niche v mass market;
Inclusive Not Exclusive	- Social / community / health / wider impacts / benefits.

Note: Each individual forest has been evaluated against these penetration influences on the basis re level of positive or negative impact. These criteria were then used to finalise penetration rates for each forest area calculated.

D4.3 The Range of Penetration Rates

The table below highlights the range of penetration rates used in our examination of key forests.

A range of penetration rates for day visitors, UK visitors and overseas visitors is provided. Levels of repeat visits for the day visitor market are based on the length, type, scale, quality of product provisions on offer to the local market and is related to local market population, active bike club participants, local enthusiasts, community aspirations, etc, as well as the above ‘penetration criteria’. For overnight visitors, we have assumed no opportunity for repeat visits ie one visit per overnight tourist.

PENETRATION RATE RANGE USED			
Market Type	Low	High	Repeat Visit Times
Day Visitor Penetration Rates	5%	50%	1.5 to 4
UK Overnight Penetration Rates	4%	40%	None
Overseas Penetration Rates	1%	10%	None

Note: These ranges are indicative and should not be attributed to solely one forest site under investigation.

D4.4 Basis of Calculation – Scottish Lowlands Forest District

Local Resident Market

For the Scottish Lowlands Forests, population isochrones have been drawn and the size of local population catchment quantified, at drive time intervals of 0-1 hour and 1-2 hours as follows:

ESTIMATED SIZE OF LOCAL RESIDENT CATCHMENT		
Cycle Forest	0-1 Hour	1-2 Hours
Blairadam	2,751,284	4,113,444
Carron Valley	2,827,942	4,117,558
Arran	4,986	1,465,591
Fauldhouse	3,000,263	4,279,134

In order to minimise market duplication, minimise displacement and in conjunction with previous TRC forest cycling studies, only the one-hour local resident catchment population has been used in the further calculations in this study.

As outlined in previous studies (and noted in earlier sections of this report), TRC have assumed that on average 6% of the UK population actively participate in mountain biking as a sport (based on Sports Marketing Survey’s data). By applying this to the local resident market catchments, the number of people who actively participate in mountain biking in the Scottish Lowlands has been quantified.

As is widely known, there is no up-to-date market data on the number of people cycling in the UK. Cycle ownership in the UK is still increasing but there is no evidence to actually support a growth in ‘off-road’ mountain biking. However, the consultants believe that the development and promotion of a sustainable trail networks combined with the Land Reform Act (re new access legislation), the development of high quality purpose-built single track cycle centres across Scotland, new cycle products and brands: the health agenda, etc cannot fail to grow the overall market or at least make Scotland / Cycle Scotland a more popular destination for ‘off-road’ cycling for both local resident and visitors. As a result we have presented a low and high range by flexing the number of residents who may cycle in the future.

NUMBER OF LOCAL RESIDENTS WHO PARTICIPATE IN MOUNTAIN BIKING WITHIN A ONE-HOUR DRIVE TIME					
	Local Population 0-1 Hour	Static % Participation (Low)	Number of Mountain Bikers	Growth % Participation (High)	Number of Mountain Bikers
Blairadam	2,751,284	6%	165,077	6.5%	178,833
Carron Valley	2,827,942	6%	169,677	6.5%	183,816
Arran*	99,986	6%	5,999	6.5%	6,499
Fauldhouse	3,000,263	6%	180,016	6.5%	195,017

Note: * Includes day visitors off Island.

These active mountain bikers would then be penetrated and attracted to each purpose-built single track forest cycling development. The level of penetration depends on the type, style and range of facilities and the strategic positioning of each centre – as mentioned previously. The local resident market living within the one-hour drive time will be inclined to make multiple visits to the cycle venue.

Tourist Visitors

In TRC's and EKOS' previous analysis of the national mountain bike site at Glentress as part of the evaluation study, it was identified that 25% of the mountain bike market stayed overnight ie they were overnight tourist visitors with many visiting from England.

TRC have estimated the number of tourist trips within the one-hour drive time catchment isochrone of each forest. (Research has shown that it is very unlikely tourists will travel from their overnight accommodation for more than one hour). These estimates of visitor trips have been based on 2003 United Kingdom Tourism Survey (UKTS) and International Passenger Survey (IPS) data as published on www.scotexchange.net.

The consultants have estimated the proportion of overnight tourists within the isochrone. In 2003, VisitScotland produced a factsheet on cycle tourism in Scotland which demonstrated that 8% of all UK tourists cycle during their trip to Scotland (this includes visitors on both cycling and general holidays). A greater proportion of UK visitors may cycle whilst on holiday to Scotland in the future. To reflect this, a scenario where 10% of people on holiday are assumed to cycle has been prepared. No information is available for overseas tourists, but TRC have assumed a lower level of penetration without future increase, due to the average profile of the overseas visitor to Scotland.

The number of potential 'cycling tourists' within the one-hour drive time isochrone of each forest has been estimated as follows:

UK CYCLE TOURISTS WITHIN THE ONE-HOUR DRIVE TIME					
	(Non-Business) No. of UK Tourist Trips	UK Visitors Who Cycle			
		% (Low)	Number (Low)	% (High)	Number (High)
Blairadam	5,573,105	8%	445,848	10%	557,311
Carron Valley	5,920,265	8%	473,621	10%	592,027
Arran	151,800	8%	12,144	10%	15,180
Fauldhouse	5,928,670	8%	474,294	10%	592,867

OVERSEAS CYCLE TOURISTS WITHIN THE ONE-HOUR DRIVE TIME			
	(Non-Business) No. of Overseas Tourist Trips	Overseas Visitors Who Cycle	
		%	Number
Blairadam	800,280	5%	40,014
Carron Valley	1,046,820	5%	52,341
Arran	11,160	5%	558
Fauldhouse	1,198,970	5%	59,949

Note: No high range assumed, limited opportunity.

The consultants have then applied a penetration rate to the quantified potential tourist visitor cycle market and outcomes re final trail usage totals are now detailed.

Trail Usage Calculation

In order to assess the level of penetration for the Scottish Lowlands single track cycle trails, a visitor model has been developed for the national cycle centre at Glentress, based on the findings from the visitor survey as part of the 7stanes evaluation and the estimated 150,000 visitors at Glentress as follows:

COMPARATIVE PENETRATION MODEL – GLENTRESS						
Day Visitors	Catchment Population	% Who Mountain Bike	Penetration Rate %	No. of Multiple Visits	No. of Users	%
0-1 Hour	1,229,600	6%	40%	2.5	73,776	48%
1-2 Hours	3,246,657	6%	20%	1.0	38,960	26%
Overnight Visitors	Visitor Trips	% Who Cycle	Penetration Rate %	No. of Multiple Visits	No. of Users	%
UK Tourists	3,999,200	8%	12%	1.0	38,392	25%
Overseas Tourists	820,310	5%	3%	1.0	1,229	1%
Total					152,358	100%

The above model demonstrates that Glentress attracts approximately 150,000 cycle visitors and approximately 75% of the visitors are day visitors and 25% overnight visitors. This reflects the results of the visitor survey carried out as part of the evaluation process. The penetrations for Glentress are high, demonstrating icon status of this national cycle attraction (ie see penetration criteria 'fit'). For regional and local facilities, the penetration levels would be less. Local community facilities (Type A and B) will generate a higher proportion of repeat visits amongst the one-hour drive time market, particularly if the facility has been built by community volunteers / local bike clubs ie Type A local facilities.

Consultants now detail below a breakdown of the penetration rates for the Scottish Lowlands Forests based on our earlier penetration criteria.

PENETRATION MODEL						
	Local Residents Day Visitors			Overnight Tourist Visitors		
	Drive Time	Penetration Rate %	Multiple Visits	Tourists	Penetration Rate %	Multiple Visits
Blairadam	0-1 Hour	15%	1.5	UK	2%	1.0
				Overseas	1%	1.0
Carron Valley	0-1 Hour	15%	1.5	UK	2%	1.0
				Overseas	1%	1.0
Arran	0-1 Hour	30%	2.0	UK	40%	1.0
				Overseas	10%	1.0
Fauldhouse*	0-1 Hour	2%	4.0	UK	0.5%	1.0
				Overseas	0.25%	1.0

Note: * Penetrations assume limited facilities only – aimed at local residents (high penetration rate from a 20 minutes drive time).

Based on the above assumptions and comparisons, a detailed visitor usage model has been prepared for each forest centre under two scenarios low and high usage. The purpose of this range is to provide FCS with an indicative trail usage scenario. This usage assumes that the product development recommendations for each forest have been executed.

The estimated number of cycle users and the demand breakdown per forest is summarised below.

NUMBER OF TRAIL USERS – LOW					
	Day Visitors		Overnight Visitors		Total Visitors
	Number	%	Number	%	
Blairadam	37,142	80%	9,317	20%	46,459
Carron Valley	38,177	79%	9,995	21%	48,172
Arran	3,599	42%	4,914	58%	8,513
Fauldhouse	14,401	85%	2,521	15%	16,923

NUMBER OF TRAIL USERS – HIGH					
	Day Visitors		Overnight Visitors		Total Visitors
	Number	%	Number	%	
Blairadam	40,238	78%	11,546	22%	51,784
Carron Valley	41,359	77%	12,364	23%	53,723
Arran	3,899	39%	6,128	61%	10,027
Fauldhouse	15,601	83%	3,264	17%	18,865

A breakdown of the overnight visitors has been summarised as follows. Again the tables show trail usage based on today’s market data as well as an assumed high-side scenario.

OVERNIGHT VISITOR BREAKDOWN – LOW					
	Number of Overnight Visitors	UK		Overseas	
		Number	%	Number	%
Blairadam	9,317	8,917	96%	400	4%
Carron Valley	9,995	9,472	95%	523	5%
Arran	4,914	4,858	99%	56	1%
Fauldhouse	2,521	2,371	94%	150	1%

OVERNIGHT VISITOR BREAKDOWN – HIGH					
	Number of Overnight Visitors	UK		Overseas	
		Number	%	Number	%
Blairadam	11,546	11,146	96%	400	4%
Carron Valley	12,364	11,841	96%	523	4%
Arran	6,128	6,072	66%	56	1%
Fauldhouse	3,264	2,964	91%	300	9%

D4.5 Conclusion

It is estimated that the Scottish Lowlands Forest area will generate over 100,000 cycle visits – assuming full development of product recommendations takes place.

Two very distinctive markets are targeted by two very different product / destination offerings. On the one hand there is Arran, with a high visitor market ie 58% of usage estimated to be overnight visitors and a penetration rate of 40% of overnight UK users re it is a captive market. Safety fears on Arran roads and quality of single track product / linkages to other villages / attractions, etc helps to promote forest cycling. There is an opportunity to promote recreational visitor cycling on Arran’s forest roads and strategic single track link sections will both improve the visitor experience and increase route safety. In addition, there is the opportunity to build on Arran Adventure’s Trailquest product which has successfully attracted groups to the Island to participate in cycling.

Local enthusiasts are developing cycle single track routes, which should be supported as it adds another recreational offer to the Island's facilities. This development can also be accessed from the Ferry, so even day visitors (without a car) could be attracted.

Blairadam and Carron Valley developments will be very much based on attracting local day visitor demand. These developments are both key local community projects supporting the growing interest in mountain biking and complementing the proposed regional national purpose-built centres.

They are strategically important to relieve ongoing visitor pressure at key sites and they will help to grow and improve demand longevity in the sport by giving local access at a grassroots level. It is estimated that Blairadam and Carron Valley between them will generate over 75,000 day visitor cycle visits – such is the scale of the one-hour visitor population catchments. Both these centres will expect a much higher proportion of repeat visitation ie local / community access, outdoor education, social inclusions and bike club demand etc. They will also generate overnight visitor demand, particularly the VFR market.

Consultants are of the opinion that Fauldhouse, like Blairadam and Carron Valley will predominantly target a day visit market. It is believed that Fauldhouse will attract a very concentrated day visitor market with the majority from within a 10-20 minutes drive time from the forest. It will focus / target local residents / schools and youth groups. As a result a short entry novice trail is recommended. An opportunity to introduce a freeride fun park on the back of an emerging bike club / youth group in the future should be considered as and when appropriate.

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- VI Estate Diversification Opportunities and Developments**
- VII Urban ‘Type’ Cycle Developments / Campaigns**
- VIII 2005 Cycling In Scotland Research (VisitScotland)**

APPENDIX I

Contact List

CONTACT LIST	
Master Contacts	
Stuart Chalmers	Forestry Commission Scotland
Elaine Jamieson	Forestry Commission Scotland
Colin Hossack	Forestry Commission Scotland
Rena Tarwinska	Forestry Commission Scotland
Fiona Murray	Forestry Commission Scotland
Alan Stevenson	Forestry Commission Scotland
Steve Duncan	VisitScotland – Active Scotland
Jillian Swankie	VisitScotland – Active Scotland
Karl Bartlett	Forestry Commission Scotland
Steve Williams	Forestry Commission Scotland
Mareike Bode	VisitScotland – Research
Campbell Gerrard	Sportscotland
Colin Palmer	IMBA UK
Pete Laing	Trail / Design Consultant
Jack Hunt	Sustrans Scotland
Bridget Jones	Loch Lomond and the Trossachs National Park
Deborah Spray	SNH
Steven Dott	Argyll and the Islands Enterprise
Paul McCafferty	Scottish Enterprise Forth Valley
Jacqueline McDonnell	Lochaber Enterprise
Simon Bennett	Scottish Enterprise Lanarkshire
Dafydd Davis	Trail / Design Consultant
Joey Klien	IMBA – International
Paul Masson	Cycletherapy
Cowal and Trossachs Forest District	
Robin Kennedy	Glenbranter Visitor Centre / Forestry Commission Scotland
Alisdair Esckersall	NTS
Dr Simon Zisman	RSPB
Andrew Ritchie	Ardmay Outdoor Centre
Phil Thompson – Senior Management	Ardroy Outdoor Centre, Lochgoilhead
Mike	The Lochgoilhead Outdoor Centre
Richard Mackenzie	Ministry of Defence – Ardgartan
Paul Livingston / Andy Whitlock	Drimsynie Estate Holiday Park
Aiden Docherty	Ardentinny Outdoor Centre
Allan Livingston	Great Escape, Highland Stores – Dunoon
Angie	Outdoor Spirals – Dunoon
Peter Wilson	Actual Reality Scotland – Dunoon
Stuart Macdonald	Ardentinny Community Trust
Andy Beveridge	Benmore Outdoor Centre
Russel and Dorothy Bruce	Cowal Fest
Ian Williams	Kilfinan Greenways Association
Neil / Willie Young	STRAMASH
Euan	Pro Adventure Scotland
Peter Siebelt / John Dunn	Glasgow Mountain Bike Club
Paul Davison / Eddie Addis	Stirling Mountain Bike Club
Gwyneth Scott	Strathfillan Community Development Trust
Tim Hill and Angela Douglas	Scotland's Woodland Trust
James	Mounter Bikes (Callander)
Gary Farewell	Dounans Scottish Outdoor Centre
Peter Barclay	Lomond Activities – Drymen
Gordon Allan	Loch Katrine Steamship – Sir Walter Scott
Peter Pollock / Dave Hutchen	Scottish Downhill Association
Mark Schmidzu	Wheels Scottish Cycle Centre and Trossachs Backpackers
John Rigley	Trossachs Cycle Hire (Trossachs Holiday Park)
Dave Fowler	Blairvadach Outdoor Education Centre
Rowena [REDACTED]	Coach House Coffee Shop
Lorne Forest District	
Andy Rodgers	West Highland Wheelers
David Ayling and Chris Hutchens	North Argyll Cycle Club and Barcaldine Developments
Tom Smith	West Highland Wheelers and North Argyll Cycle Club
Tony Ashward	Barcaldine Trail Development Volunteer
Representative of	Chain Reaction – Retail Outlet
Dave Smith / Peter Danes	Glencoe Community Development Group
Caroline Walker	Glencoe Community Council

CONTACT LIST	
David Graham	Oban Bike Shop
Representative of	Oban Cycles
Sue Williams	Argyll and Bute Council
Manager	Killin Outdoor Centre and Mountain Shop
Phil Simpson	Abernethy Trust Ardeonaig
Martin Macdonald	Off Beat Shops
Fiona Chalmers	NTS Glencoe Visitor Centre
Fiona Brown	Invercoe Highland Holidays
Alex Blanc	Ballachulish House Hotel and The Isles of Glencoe Hotel & Leisure Centre
Mel Castol	Ballachulish Community Council
West Argyll Forest District	
Brian Baird	Forestry Commission Scotland
Kirsten Robb	Dalriada Project
Alison Milstead	Carradale Hotel
Colin Burgess	Carradale Caravan Park
Elaine Biggart	Pony Trekking – Carradale
Chris Smith	Cairnbaan Hotel Argyll – By Lochgilphead
Nicholas Ryan	Crinan Hotel
Caroline Battle	Stag Hotel and Restaurant – Lochgilphead
Jim MacCulloch	Argyll Caravan Park – Inveraray
Ian MacDonald	Lochgilphead Caravan Park
Joanne Potter	Grey Gull Inn – Ardrishaig
Chris Hall	Argyll Trail Riding
Dafydd Davis	Trails Wales
Kevin	Crinan Cycles
Paul Selfidge	Mid Argyll Bike Club
Scottish Lowlands Forest District	
Robert Hunter	Stirling Council
Anne Michelle	Leadership +
Lesley Gallacher	Stirling Partnership for Urban Regeneration (SPUR)
Duncan Sinclair	Stirling Council Education and Community
Mark Forest	North Lanarkshire Council
Emma Walker	Lanarkshire Environmental Key Fund (LEKF)
Unknown	Scottish Water
Niel Thompson / Richard Barton	Carron Valley Development Group
Owner	Avanti Cycles
Gerrard	Arran Adventure Company
Club Members	Arran Bike Club
Rona Fullerton	Arran TIC
Malcolm	Arran Access Trust
Graham Walker	SNH
Kate / Steven Mason	NTS
Nigel Marshal	North Ayrshire Council
Ian Leider	Brodick Cycles
Tracy Gibson	Brodick Boat and Cycle Hire
Ronnie Man	Auchenrannie Hotel
Robbie Brown	Caledonian MacBrayne
Colin Peacock	Forestry Commission Scotland
Grant Doig	Blairadam Trail Development Group
Gordon Young	Kelty Steering Group
Kate Stewart	Kelty Heritage Trails
Kate Stewart	Fife Council
Sandy Wallace	Sandy Wallace Cycles
Craig Hardie	Hardie Bikes
Lynne Bramall	Lochore Meadows Country Park Outdoor Education Centre
Bob Reid	Strathclyde Park
Alex Muirhead	Ecosse Regeneration
Anita Craig	Falla Hill Primary School
Ann Purdy	St John The Baptist Primary School
James Smalls	Forestry Commission Scotland
John Nolan	West Lothian Council
Chris Norman	West Lothian Council

APPENDIX II

Examples of Cross-Country Trails in Scotland and Wales

EXAMPLES OF CROSS-COUNTRY TRAILS IN SCOTLAND AND WALES		
Forest Trail	Length of Route	Grade
Gwydyr		
Marin Mountain Bike	25km	Experienced
Penmaco	23km	Experienced
Coed-y-Brenin		
Fun Route	11km	Novice
Karrimor	38km	Experienced
MBR	22km	Experienced
Red Bull Trail	11km	Experienced
Sports Routes	15km	Intermediate
Machynlleth		
Mach 1	16km	Novice
Mach 2	23km	Intermediate
Mach 3	30km	Advanced
Nant Yr Arian		
Summit Trail	16km	Experienced
Syfydrin	35km	Experienced
Clan Wrtyd Wells		
Irfor Forest	20.5km	Experienced
Myndd Trawsnant	27km	Experienced
Esgair Dofydd	26km	Experienced
Afan Forest Park		
The Wall	23km	Technically Difficult
Penhydd	22km	Technically Difficult
Skyline	46km	Difficult
White's	15km	Difficult
Cwn Carn		
Twrch	15km	Experienced
Glentress		
Buzzards Nest	8km	Blue
The Hub	14km	Blue
Red Route	17km	Red
Helly Hansen V Trail	29km	Black
Dalbeattie		
Ironhash	11.5km	Green
Moylehill	14km	Blue
Hardrock	27km	Red
Kirroughtree		
Bargaly Wood	6km	Green
Larghill	8km	Blue
Doonhill	4km	Blue
Twister	14km	Red
Blackcraigs	31km	Black
Innerleithen		
Traquair	19.2km	Red
Mabie		
Big Views	8.2km	Green
Woodhead + Lochbank Loops	10km + 12.5km	Blue
The Phoenix Trail	17km	Red
Laggan Wolftrax		
Red Route	6.6km	Red
Black Route	7.8km	Black Double Diamond
Ae		
Ae Line Scottish Power Renewables Trail	19.6km	Red

APPENDIX III

7stanes – Phase II Proposed Construction Costs

SUMMARY OF PROPOSED TRAIL DEVELOPMENT CONSTRUCTION COSTS 7STANES PHASE II						
Forest and Course Type	Constructed Length km	Cost of Construction £ At 2005 Prices				Approx. Cost Per Metre (2005 Prices) £
		2005	2006	2007	Total Cost	
Ae						
Skills area - 1.5km	1.50	£ 12,500			£ 12,500	£ 8.33
Downhill trail		£ 20,000			£ 20,000	
Red trail - 3km	3.00	£ 32,000			£ 32,000	£ 10.67
Black trail - 1.5km	1.50	£ 26,000			£ 26,000	£ 17.33
Blue trail - 6km		£ 2,500			£ 2,500	
Green trail - 4km	4.00	£ 20,000			£ 20,000	£ 5.00
People / bike counter		£ 1,250			£ 1,250	
Kirroughtree						
Black trail - 1.5km	1.50	£ 30,000			£ 30,000	£ 20.00
Blue trail - 1.5km	1.50	£ 30,000			£ 30,000	£ 20.00
People / bike counter		£ 1,250			£ 1,250	
Dalbeatie						
Skills area			£ 12,500		£ 12,500	
Blue / red route - 4.25km	4.25		£ 85,000		£ 85,000	£ 20.00
Black loop - 200m	0.20		£ 4,000		£ 4,000	£ 20.00
Timber trail - 100m	0.10		£ 2,000		£ 2,000	£ 20.00
People / bike counter			£ 1,250		£ 1,250	
Gientrool						
7.5km blue	7.50		£ 140,000		£ 140,000	£ 18.67
People / bike counter			£ 1,250		£ 1,250	
Mabie						
Skills area				£ 12,500	£ 12,500	
Green and blue loop - 1.9km	1.90			£ 22,500	£ 22,500	£ 11.84
Red schools loop - 1.3km	1.30			£ 24,000	£ 24,000	£ 18.46
People / bike counter				£ 1,250	£ 1,250	
Newcastleton						
Blue trail - 2km	2.00			£ 40,000	£ 40,000	£ 20.00
People / bike counter				£ 1,250	£ 1,250	
Glentress						
Green and blue trail and free ride - 4km	4.00	£ 50,000	£ 20,000		£ 70,000	£ 17.50
People / bike counter		£ 1,250			£ 1,250	
Innerleithen						
Extend and develop existing trails - 3km	3.00		£ 32,000	£ 20,000	£ 52,000	£ 17.33
People / bike counter			£ 1,250		£ 1,250	
Total Trail Build Costs	37.25	£ 226,750	£ 299,250	£ 121,500	£ 647,500	£ 17.38
Total Costs Excluding Trail Counters	37.25	£ 223,000	£ 283,000	£ 106,500	£ 612,500	£ 16.44

APPENDIX IV

Key Purpose-Built / Single Track Models

KEY PURPOSE-BUILT / SINGLE TRACK MODELS

In Section 3 of the report, the consultants highlighted the current / existing single track product provisions throughout Scotland. In this Appendix TRC pinpoint key development sites (as selected from Section 3 benchmarks) and examine them in more detail re best practice product development and market demand trends. The best practice models / sites examined are as follows:

1. Glentress
2. Kirroughtree
3. Laggan Wolftrax
4. Coed-y-Brenin

GLENTRESS – A BEST PRACTICE MODEL	
Elements of Success	Description
Product	<ul style="list-style-type: none"> The world-renowned Glentress, is a mecca of the sport and is the recognised best mountain biking centre in the UK; It has five recognised loops as well as many integral freeride areas, skills' loops, and Trailquest. It caters for all markets offering easy graded green trails through to black severe graded trails. Includes the Helly Hansen V Trail Glentress' signature trail.
Market	<ul style="list-style-type: none"> Glentress already has a very good reputation and was voted the best Mountain Biking Centre 2004 (Singletrack); Attracts upwards of 3,000 mountain bikers per week; Attracts / targets all types of markets from novice through to experienced; Recognised by the market as the 'Number 1' place to mountain bike in the UK; Year-round demand from a mix of markets including older couples, women, etc for a range of recreational activities; Has formed a Saturday morning Children's Club and offers skills tuition, guided rides.
Wider Product Facilities	<ul style="list-style-type: none"> Glentress is also home to the award winning Hub Café re food and drink, now a separate brand 'The Hub in the Forest'; Bike hire, bike wash, bike service facilities all provided; Has three car park facilities offering alternative starting points; There is also a dedicated cycle ranger of Glentress who concentrates on trail management and maintenance.
Unique Selling Point	<ul style="list-style-type: none"> Initially it was the Helly Hanson V signature Trail however today Glentress is <i>'the'</i> destination with its wide variety of products as well as the excellent service facilities on offer; The Glentress product and the experience it offers is the envy of other centres; Glentress / Tweed Valley will be the location for Scotland's Cycle academies – focusing on downhill and cross-country disciplines.
Destination Factor	<ul style="list-style-type: none"> Glentress is situated in the heart of the Borders but is only 40 minutes away from Edinburgh; Located one mile outside the town of Peebles there is lots to see and do – good alternative recreational facilities, food, drink and tourist provisions on offer; Tweed Valley has fabulous scenery and some excellent visitor attractions and generally a good tourism product; Lots of pubs, B&Bs and campsites nearby as well as an abundance of four and five star hotel accommodation.
Development Plans	<ul style="list-style-type: none"> Funding for Phase II of the development has only recently been secured. The main focus of Phase II will be to widen the sport to newcomers, families and community groups; Plan to spend £71,000 at Glentress on trail extensions; To attract people to the sport who have never tried or attempted it before; Facilitate outreach programmes with community / disabled groups; A volunteer bike patrol system is being considered which will focus on the visitor welcome, safety and trail management; Glentress will continue to develop to ensure it maintains its position as the number one mountain biking centre in the UK; A larger permanent central facility is proposed (the Hub is now over capacity) – a private building in twelve acres of land adjacent to Glentress has just been purchased for this purpose and will be converted, but only after market consultation; The new central facilities will cater for all market needs – redressing the balance towards walkers and other recreation users. This facility will open in 2007.
Future Opportunities	<ul style="list-style-type: none"> To attract a wider market – grow the sport link to wider recreation, forest use; Enhance product value / brand recognition; Begin to develop an overseas market – on the back of Glentress' potential as a niche mountain bike resort (valuing forest recreation); Continue to work with local businesses and VisitScotland to maximise destination linkages; Strengthen the product – continue to maintain and improve quality.

KIRROUGHTREE – A BEST PRACTICE MODEL	
Elements of Success	Description
Product	<ul style="list-style-type: none"> • One of eight purpose-built mountain bike sites situated in Southern Scotland; • Provides a biking product which caters for families through to experts; • Products range from family-friendly trails to top technical challenges; • Has four main routes, two (blue and green routes) targeting novices, children and families whilst the red and black trails are best tackled by intermediates and enthusiasts.
Market	<ul style="list-style-type: none"> • Attracts an estimated 33,000 cyclists per annum; • Kirroughtree has been developed as a family centre which aims to cater for novices / children / families as well as the more experienced mountain biker ie black crags, black loop – severe gradients. The McMoab feature has become the signature of black trail.
Wider Product Facilities	<ul style="list-style-type: none"> • Kirroughtree is firstly a family centre and cyclists share facilities with other users. Not only is it a cycling centre, but also includes a play park, visitor centre, fishing, camping, food outlet and education / outsourcing programmes for schools and community groups; • Kirroughtree is a popular forest with other users ie walkers – other markets have not to be excluded due to cycling. Mountain biking has been built around other market needs a fully integrated forest development.
Unique Selling Point	<ul style="list-style-type: none"> • With lots to see and do at Kirroughtree there is no doubt it is an ideal family cycle / forest recreation centre; • It offers a ‘rounded’ product offering and it is this which makes Kirroughtree an attractive visitor cycling destination; • The level and range of trails at Kirroughtree are well known and it has an excellent brand image throughout the marketplace re cycle reviews / magazine critiques.
Destination Factor	<ul style="list-style-type: none"> • Situated three miles from Newton Stewart where there is food and drink, retail and accommodation premises readily available; • The Kirroughtree product is continuing to evolve and grow; • A flexible offering together with family-friendly trails ensures an enjoyable fun-filled experience is had by all at Kirroughtree; • Positioned as a key destination within the 7stanes umbrella brand; • The central facilities and style of flowing cross-country trails are the real cycle visitor draw to this venue.
Development Plans	<ul style="list-style-type: none"> • As part of 7stanes Phase II Kirroughtree management hopes to increase trail lengths as well as carry out improvements to signage, marketing and interpretation etc; • Introduce improved green trail off public road; • Improve / extend black trail – limit forest road sections; • Improve blue and red trail / network approach.
Future Opportunities	<ul style="list-style-type: none"> • There is no doubting the differentiation of the Kirroughtree cycling product. It has the opportunity to continue to achieve quality media coverage / market appraisal and grow the number of overnight visitors staying in the surrounding area.

LAGGAN WOLFTRAX – A BEST PRACTICE MODEL	
Elements of Success	Description
Product	<ul style="list-style-type: none"> • Laggan Wolftrax is a recent addition to the FCS off-road cycle provisions (December 2004); • Uplift facility provided by BaseCamp MTB via transit van (on an ad hoc basis); • Has nearly 18km of trail ranging from the 3.2km blue grade fun park to the extremely difficult double black grade 6km, route through to the 6.6km red grade trail for intermediate riders (however if uplift is utilised trail lengths reduce by 1-2km).
Market	<ul style="list-style-type: none"> • Before these recent developments, there was no cycling in the forest; • Usage numbers recorded to date will equate to 30,000 visits / riders in its first year of operation; • Anecdotally the market is very pleased with the product which is being used heavily as short, half-day entertainment provision; • Laggan Wolftrax pulls day visitors from Aviemore and also complements the World Cup Downhill track at Nevis Range; • Caters for intermediate markets as well as the experienced market; • Market very appreciative of uplift provision allowing 'session' riding of red and fun park routes; • The lack of easier dedicated downhill facilities in Scotland has been to the advantage of Laggan. Laggan now attracts a high proportion of users with 'big hit' bikes.
Wider Product Facilities	<ul style="list-style-type: none"> • BaseCamp MTB is a friendly bike shop and café located at the bottom of Laggan Wolftrax. It includes cycle hire, a spares and repairs shop, café, showers, toilets and bike wash; • Community is highly involvement in the forest development. Includes the promotion of events, as well as walking, horse riding and wildlife enjoyment; • A pony trekking business operates seasonally from Laggan.
Unique Selling Point	<ul style="list-style-type: none"> • Short, sharp adrenaline-pumping rides; • Niche product – unlike no other in Scotland; • Uplift is very popular and effective opportunity for trail / fun park sessions; • Very popular for youth / emerging markets; • Short, half-day entertainment value.
Destination Factor	<ul style="list-style-type: none"> • Recognised high octane adventure product – could attract similar markets to white-water rafting / kayaking / surfing etc; • If wider links can be promoted to Aviemore or Fort William, Laggan Wolftrax offers appeal as an overnight destination opportunity re weekend of cycling or indeed alternative tourism / recreation provisions ie food / drink and accommodation.
Development Plans	<ul style="list-style-type: none"> • Aspirations to develop a larger red loop helping to extend visitor stays; • Phase II developments will be based upon the market success of Phase I and the appetite of the local community and partners for a Phase II development; • Build on freeride opportunities / skills and complement to Witch's Trails and World Cup Downhill, Nevis Range.
Future Opportunities	<ul style="list-style-type: none"> • Consideration to entry level routes to become an integral part of the single track product offering in the Highlands of Scotland; • Benefit fully from links to Fort William, Inverness and the value of being linked to the Cairngorms National Park; • With Lochaber Outdoor Capital and National Park credentials grow into a recognised overnight visitor destination for mountain biking.

COED-Y-BRENIN – A BEST PRACTICE MODEL	
Elements of Success	Description
Product	<ul style="list-style-type: none"> • Coed-y-Brenin is home to an ever increasing number of world-class single track mountain bike trails. It is truly a mecca for the mountain bike fraternity; • Coed-y-Brenin has been an established single track mountain bike destination for over a decade. It was the first of its kind in Western Europe; • The Coed-y-Brenin product is mainly targeted at the experienced end of the market. At present only the Fun Run is appropriate for the November rider; • Construction of a new visitor centre and the central facilities for mountain biking ongoing; • Has five single track trails totalling over 100km; • Includes the world-famous Red Bull Trail.
Market	<ul style="list-style-type: none"> • Majority of trails target experienced riders. All literature stipulates that only the Fun Park be ridden by novice market segments; • Attracts between 40,000-60,000 visitors per annum; • Significant proportion of market is overnight. Coed-y-Brenin has an excellent reputation, a three-pronged trail system in place and is an excellent weekend cycling destination; • Currently substantial reinvestment going into Coed-y-Brenin – on the back of this Forestry Commission Wales anticipates attracting over 100,000 cyclists.
Wider Product Facilities	<ul style="list-style-type: none"> • The new £1.6m state of the art visitor centre will form the 'backbone' of Coed-y-Brenin's wide product offering. Will be the focal point of the forest park. Shop / hire and repair as well as retail / café facilities will be offered; • The forest has a number of walking trails as well as plenty of riverside / picnic sites.
Unique Selling Point	<ul style="list-style-type: none"> • The forest park is suitable for all groups and is a very popular family destination of North Wales; • It is hoped Coed-y-Brenin visitor centre will act as the catalyst for growth in the numbers of cyclists; • Coed-y-Brenin, the brand, cannot be underestimated, it was the first single track, purpose-built cycling experience in the UK. This is a significant selling factor for all cyclists.
Destination Factor	<ul style="list-style-type: none"> • Continues to attract significant proportion of overnight visitor. Is a recognised weekend cycling destination; • Good local service support re traditional pubs / cafés and accommodation in the area which fits with the cycling markets expectations; • Coed-y-Brenin cycling has significant economic impact on the local area.
Development Plans	<ul style="list-style-type: none"> • Upgrading and refreshing single track trail system; • Significant financial reinvestment in trails; • Attract wider market segments ie novice / intermediate markets; • Ensure trail sustainability and health and safety requirements.
Future Opportunities	<ul style="list-style-type: none"> • Aspire to again become the number one mountain biking destination of the UK.

APPENDIX V

Other Key Mountain Bike Destinations

OTHER KEY MOUNTAIN BIKE DESTINATIONS

In this Appendix, to add extra value to this project and to provide the opportunity for objective comparison, TRC provide an overview of alternative single track purpose-built mountain biking product / destinations – throughout the UK and Overseas. The purpose of these benchmarks is to ‘set the scene’ re current product provisions / future developments and aspirations at other potentially competing mountain biking destinations. It also gives an understanding of other successful mountain bike facilities. The four benchmarked destinations are as follows:

1. Mountain Bike – Wales
2. Mountain Bike – North of England
3. Mountain Bike – Northern Ireland
4. Mountain Bike – North America

A detailed thumbnail of the nature of each product is detailed below.

1 Mountain Bike – Wales

Forestry Commission Wales have developed five world-class mountain bike centres. As a result of these inaugural developments Wales has been transformed into a haven for mountain bike enthusiasts and mountain biking responsible for bringing millions of additional pounds into the Welsh economy. It was from this model that Scotland’s initial 7stanes project originated. Cycle Tourism Wales, it is estimated, will be worth £41 million by 2007.

Forestry Commission Wales currently employs two bike rangers one in the North and one in the South of the Country. These rangers have been employed, on the one hand to develop and grow the market, and on the other to maintain / audit all the trails in line with Health and Safety and other legislative requirements. In future their role could be expanded to cover visitor services, maintenance and other issues.

The trails at Coed-y-Brenin, Gwydyr, Nant-yr-Arian, Afan Forest Park, Glyncorwg and Cwmcarn include purpose-built, waymarked trails, family routes as well as downhill experiences. The centres are supported by visitor centres, bike facilities and food and drink provisions and wider tourism infrastructure linkages.

It must be noted that Wales has another two cycling centres. These, however, are not on Forestry Commission land and are provided under the auspices of the Welsh Local Authorities.

From our research we estimate that between 100-150,000 riders use the Forestry Commission provisions annually. There is widespread support for the Welsh product from Local Authorities / health bodies and the Welsh Assembly. Each sees a benefit to the local populations re social, health and economic stimulus / benefits.

- Each centre has unique features and offers different terrain, different culture and different product characteristics. An individual approach to the design and development of trails in Wales was very important;
- The product is differentiated by geographical location ie the trails in the South target the South-East England market while the routes in the North target centres of population in North-West England ie Liverpool and Manchester.

A more detailed account of Coed-y-Brenin and improvements / reinvestment to the world-renowned destination is as follows:

- Over the last two – five years the number of cyclists visiting Coed-y-Brenin has actually decreased. Mainly as a result of trail quality and high erosion / degradation of trails. The product has become a little stale and the market a little tired. It has also seen issues of bad press and operational problems counter previous successes. These negative factors are being eliminated and the Forestry Commission expect Coed-y-Brenin to rise and become successful once again in the near future;
- A new 'state of the art' visitor centre costing £1.6m is currently under construction. This will be the catalyst for a resurgence Coed-y-Brenin and will include new cycling facilities and food and drink services. This is being aimed at a wider forest recreation market, not just cycling;
- Currently Coed-y-Brenin attracts between 40-60,000 riders per annum. This is predicted to rise to 100,000 after the visitor centre / trail investment;
- Coed-y-Brenin management hope the centre becomes the dominant force in mountain biking it once was augmented by wider forest recreation opportunities.

2 Mountain Bike – North of England

There are currently five forest areas in the North of England that have aspirations to develop single track mountain bike facilities. The five forests are all at differing development stages – in some cases planning and funding issues are constraining development proposals. It is important that FCS is aware of the North of England forestry aspirations and development plans as potentially it could have an impact on Southern Scotland / overnight visitor demand.

A synopsis of development plans at each of the five forestry areas is as follows:

Hamsterley (Teesdale)

- In early 2005 the go-ahead was given for the biggest proposed mountain bike trail project in Northern England. Funding for Phase I of the project exceeded £200,000 and included the Forestry Commission, bike clubs and other funding partners;
- Phase I of the project is now nearing completion and includes the development of a 'state of the art' skills area and off-road links between Hamsterley Visitor Centre and the [REDACTED] end of the forest. This link development is green graded and separates cyclists from walkers while offering safety and security to young children, families and beginners;
- The skills area is where riders of all abilities will have the opportunity to develop their proficiency. Blue, red and black graded options for riders are available and the skills area is appropriate for session cycling (back and forth over the same obstacle);
- The cost of developing Phase I per km has been very expensive;
- The project partnership aim to raise a further £2 million to get Phase II underway and is considerable due to poor ground conditions. Their aspirations to develop over 50km of red and black routes at the [REDACTED] end of the forest – a very ambitious project;
- The partnership believes that Hamsterley can become an international venue for mountain biking in the not too distant future if all development proposals are realised;
- Prior to the 2005 developments there were unsustainable trail facilities at Hamsterley. However, it is now believed that these new developments will widen the product offering of Hamsterley as well attract a whole new market of mountain bikers to the sport and coincidentally increase the critical mass of users to Hamsterley Forest;
- Phase I of the project was designed by Mountain Bike Specialist design consultant Pete Laing;

- The Hamsterley developments are based around the Glentress model;
- The development group is optimistic about the future success and opportunity for Hamsterley as a mountain biking destination;
- There is an existing visitor centre, replacement of this will be considered in future.

Grizedale (Lake District)

- Grizedale Forest Park provides a great day out for all levels of cyclist. It is already recognised as a family / cycling destination;
- It offers five waymarked cycle trails and caters for all types of markets from easy graded trails through to demanding, longer harder routes;
- The North Face purpose-built single track trail was opened in September 2005. This is a 10km red loop aimed at the intermediate market. This new single track development includes climbs, downhill sections, 'North Shore' and steep technical terrain;
- The new trail was funded by the well-known outdoor company / brand 'The North Face' in conjunction with the Cumbria Rural Regeneration Fund;
- Designed by the Welsh Trail Designers responsible for the Afan Forest trail network;
- Initial trail cost is an estimated £167,000;
- Grizedale Forest already attracts 200,000 visitors per year of which an estimated 25% are cyclists / mountain bikers. It is expected that cycle usage will rise considerably as a result of these new developments;
- Grizedale is a recognised destination within the Lake District;
- One of the objectives of the cycling improvements is to attract more family and overnight visitors to the area;
- Cycling is an ideal activity to augment other recreation products offered in the forest ie Go-Ape, walking etc.

Whinlatter (Cumbria)

- This proposed development is on a vast scale. The aim is to construct a 70km network of routes and loops, each with a different level of difficulty ie would target all types / level of user;
- The proposed development of Whinlatter as a key purpose-built mountain bike centre has been ongoing for sometime. A feasibility study published in 2003 estimated that Whinlatter would attract 54,000 riders per annum and be worth £1.3 million to the local economy;
- Aim of Whinlatter development is to turn the forest into a mountain biking haven to rival existing world-class purpose-built single track routes in Scotland and Wales – its main benchmark has been Glentress;

- Whinlatter management believe that if a product is developed they would have an opportunity to target existing customers at Glentress and across the 7stanes area;
- Plans for a £3.5 million mountain bike centre in Whinlatter Forest were first submitted to the Lake District National Park Authority in mid 2004, however planning consent, as yet, has not been granted for this development.
- National Park issues / concerns are the main stumbling block to the development. They are concerned about increases to visitor numbers within the National Park and having vast increases in traffic flow through a small key village;
- An evaluation of the revised plans will be held in November 2005. However a satisfactory outcome for the development is not expected.

Kielder (Northumberland)

Northumberland is often overlooked as a mountain biking destination. More popular areas such as the Lake and the Peak Districts tend to get a lot more attention. Northumberland however, has a good tradition of club road cycling on its many rural lanes. There is also a network of Sustrans and local loop routes. However, irrespective of the wider impression Kielder Forest offers routes for cyclists / mountain bikers of all ages and abilities and it is widely recognised to be one of the best known centres within the mountain bike fraternity in the UK. However, many of the trails are on forest roads (currently) through monotonous conifer plantations;

- There are 15 trails each from easy to demanding in gradient / skill level;
- It includes a cross-border trail between Kielder and Newcastleton;
- Development involves rebuilding all 15 mountain bike trails to the design, construction and quality standards being set by 7stanes and Mountain Bike Wales. This proposal will involve the constructing of a large network of interlinking trails. It is hoped to link the Kielder network with the Newcastleton 7stanes site;
- The project will be very much based around whole family participation / enjoyment;
- This project does not have planning permission and could take anything from three to eight years to achieve;
- The masterplan development has stalled due to lack of planning consent difficulties. The Kielder Partnership is continuing to work towards planning permission, however as a result, there has been a change of emphasis by the regional Forestry Commission and Hamsterley is now being pursued as the area's main cycling facility.

Dalby (North Yorkshire)

- Dalby Forest lies in the South-Eastern corner of the North Yorks Moors National Park area. It has become a popular place for all the family as well as providing a varied wildlife habitat and producing valuable timber;
- The Forest has traditionally provided cycling trails to cater for the local demand. However, over the years the trails have deteriorated and are now considered unsafe and now unsustainable for cycling;
- Forestry Commission management have taken the strategic decision on the back of poor existing trails and evident growth in the sport to begin to construct 50km of single track trail through the Forest;
- Trails will generally be at a novice / intermediate grade (blue and red) and target all cycling skill levels. It will link / be serviced by Dalby Forest's visitor centre facilities;
- The catalyst for development was an approach from a local bike club and bike manufacturer. The development project is now part of a wider funding partnership with cost overall, around £400,000.

3 Mountain Bike – Northern Ireland

Northern Ireland opened its first purpose-built mountain bike trail in Craigavon in September 2005. This 10km trail is the first to be designed within a city park in the United Kingdom and features 7km of narrow purpose-built single track trail with an earth or stone surface. The trail was designed by Dafydd Davis.

Northern Ireland has plans in place which would see it become a world-renowned off-road cycling destination. Three more cycling trails are planned for 2005, and a further 24 trails are planned for sites throughout Northern Ireland (depending on funding requirements / sources).

The Local Authorities realise the health benefits of increased cycle usage but also the benefit of cycling to the future economy of Northern Ireland in terms of tourism and the environment. Local Authorities throughout the province are working in partnership with the main landowner, Forest Service, a government body.

In 2004, 12 million pounds of funding for development of local trails in Northern Ireland were withdrawn by the Forest Services because of upkeep / maintenance. International Mountain Bike Association (IMBA) recently rated Northern Ireland poor in terms of product provisions. Before Northern Ireland, as a cycling destination, can realise its objectives, funding and operational issues with the major landowner Forest Services still have to be fully resolved.

4 Mountain Bike – North America

US mountain biking is split into two distinct markets. Either they are people looking for a trail ride, fitness endurance over a challenging terrain features – these tend to be for fitter, older people, or what is becoming ever more popular is freeride and downhill for people under the age of 25, where ski resort chairlifts are used for mountain bike uplift during the summer months. The majority of trails are owned by the US National Trust, Bureau of Land Management (BLM), Army Corps of Engineers, State Partners, Country Parks and private landowners. However, almost all of the very successful trails are built in coordination with IMBA and associated membership clubs. The US has 400 IMBA clubs who help build, develop and maintain trails.

These clubs form ‘partnerships’ with landowners to ensure that the quality of trails constructed is high. The majority of these clubs are volunteers. IMBA is promoting this model of mountain bike trail development throughout the US. They see these ‘multi-user coalitions’ as the most appropriate way to deliver these trails. Quality is controlled by adopting IMBA design guidelines.

In terms of product marketing, it seems many of the trails on public land have organically grown / been extended and refreshed over the years. For example, the mountain bikers just started coming because of the area’s scenic beauty and the trail infrastructure would then organically grow around this. Mountain bike development was not a planned and coordinated development initiative.

Additional information on some of North America’s most popular areas is detailed below.

Moab (Utah)

Moab, a small town located in South-Eastern Utah, has over 20 mountain biking trails. It has developed world-class reputation from Moab's famous Slickrock trails and is fast becoming known (internationally) for its mountain bike and access facilities. The region offers a variety of trails, diverse terrain and scenery to make this a destination of significant mountain biking importance.

Research directed TRC to numerous economic impacts of mountain biking in Utah. Main points of note include:

- The average value per mountain bike trip was estimated at \$197-\$205;
- there are currently problems with trail overcrowding / visitor management eg shared with hikers and equestrians;
- negative effects on the environment.

Moab was initially built from jeep and mining roads. However, such is the destination's popularity and in order to stay on top of the market / attract demand, the region is now being seen to add a network of single track trails to ensure its position as a key mountain bike destination is maintained in future.

Fruita

- First developed in the early 1980s by a mixture of locals and volunteers. Fruita in Colorado now boasts some of the best single track trails in the US. It consists of over 1,000 miles of track over one of the World's highest desert plateaus;
- Although Fruita is not as well known as Moab (Utah), it does offer some excellent riding opportunities. Indeed the Fruita Fat Tire Festival is said to pump \$1.5 million into the local economy;
- The Bureau of Land Management (BLM) plan to govern the use of recreational trails in Fruita. They plan to restrict mountain bike usage to specific areas. IMBA have grave concerns that this change of policy could have a negative impact on mountain bike users in the area and impact negatively on Fruita as a world-class mountain bike destination.

Whistler Blackcomb

Whistler Blackcomb, British Columbia, Canada is one of the most extensive and modern ski resorts in the World. Historically Whistler and Blackcomb were two adjacent but separate ski mountains, each with its own base villages. Since 1997 both resorts and the mountains have been owned by the conglomerate Intrawest who have invested millions of US dollars in the resort.

Essentially the resort promotes winter skiing, but summer activities have become increasingly popular. One of the most popular summer activities at the resort is Whistler Mountain Bike Park. Summer activities are said to now generate more than 75% of the Winter revenues.

Whistler Mountain Bike Park boasts 200km, 34 trails of lift-serviced gravity-fed, adrenaline-fuelled routes, but there is still something for all riders. All trails are graded from green, blue, black to double black. There is also a biker cross-country dirt jumping.

The resort offers a range of daily tours, tuition, bike camps and events aimed at all levels of ability, children, women etc.

The resort also has a large number of graded long and short distance cross-country routes (but these are not as well promoted as the Bike Park), gentle cycles in the valley bottom along the rivers edge or by the lake, hidden trails and short mountain bike skill trails.

The resort appeals to all: the armour-clad downhill freerider; cross-country endurance hard man; the family – kids and granny; the day visitor from Vancouver or across the border in Seattle; the short break tourist; the biking enthusiast.

Each year the resort hosts a number of high profile, regional, commercial events which are well supported by sponsors such as: Oakley, Kona, IMG, Crankworx etc.

In 2001, Whistler was due to hold the World Cup Downhill, Cross-Country and Dual Slalom event, but it was cancelled in 2000 by the resort management committee on the grounds of too high a commercial risk. It could impact negatively on their already high level of demand.

The network of bike trails at Whistler are continually being refreshed and expanding. In 2004 a new chairlift will provide access to three new trails. The first trail to open will be expert level route in July 2004 followed by the development of intermediate trails over the summer.

Visitor numbers to the Whistler Bike Park have increased by 500% in five years and this has prompted new trail development. The new trails will ensure that lift capacity doubles, reducing queues. There is an additional 2,200 feet of vertical terrain and the Mountain Bike Park is set to grow by 200%, giving endless future development opportunities. Whistler resort sets the standard for lift-serviced mountain biking in the World.

Whistler is definitely on a different scale to the 7stanes project. However, it is the network of downhill, cross-country and valley trails which are ever developing and evolving which is of relevance. This has created an appeal to a very wide range of markets and also creates a significant number of repeat visits, the visitor experience, quality of product and service being second to none and ever-changing.

To keep the quality of the trails high, some key high-use trails are rebuilt every season, others are retired and alternative routes created.

APPENDIX VI

Estate Diversification Opportunities and Developments

ESTATE DIVERSIFICATION OPPORTUNITIES AND DEVELOPMENTS

In this Appendix consultants highlight a number of private estate holdings where opportunities for private mountain bike development exist. In some cases these possibilities are only anecdotal aspirations, however they must be considered seriously as possible future additions to the purpose-built single track product provision in Scotland.

The five considered to have serious opportunity for development are as follows:

- 1 Blair Atholl Estate
- 2 Invercauld Estate
- 3 Drumlanrig Estate
- 4 Dunrobin Estate
- 5 Glencoe Ski / Mountain Resort

1 Blair Atholl Estate

The village of Blair Atholl with an integral alignment to the Blair Atholl Estate has an opportunity to develop an off-road mountain bike facility to cater for an independent and group outdoor activity markets. This could then be linked into an orientation / service centre for outdoor / activity 'type' target markets. At this stage these proposals are merely anecdotal. There are also opportunities to link existing accommodation provisions ie caravan parks to fun and freeride trails (but these would have to be purpose-built and private sector investment could be unlikely).

Currently Blair Atholl Estate produce a leaflet / map for cyclists showing the network of estate trails. They have four routes, each graded separately and targeting markets from novice through to experienced. Routes are on existing tracks, paths and trails – no purpose-built facilities have been added. Blair Atholl is also part of the National Cycle Network Sustrans Route 7.

Blair Atholl is already recognised as a cycling / outdoor activity destination. If an off-road / single track development was forthcoming then it would certainly have an impact in the market. However, this is unlikely due to lack of commercial return.

2 Invercauld Estate

The Estate is considering the expansion of activities and increasing the commercial opportunities of the Estate. Mountain biking is a recognised recreational activity and the Estate has signed existing cycle tracks / trails / routes, etc. However, the development of purpose-built single track is unlikely, this commercial opportunity is offset by significant capital costs required to develop / construct cycling provisions. Further, competition from mountain biking centres closer to centres of population would have an impact on any purpose-built mountain bike development in Invercauld Estate. Land for Glenshee ski slope is leased from the Invercauld Estate. The ski slope would like to consider downhill mountain bike routes, but due to lucrative stalking activity this is unlikely.

Although consultation is ongoing TRC consultants assume a cycle development on Invercauld Estate to be unlikely. The development of a very positive attitude to recreation on a private estate, car parking, maps, toilet provision, information is extremely refreshing.

3 Drumlanrig Estate

Drumlanrig Estate is an already recognised cycling destination. It includes classic woodland single track through some of Scotland's finest Lowlands scenery. There are three waymarked trails and a host of options to explore. It caters for all markets from novice through to experienced. Rick Alsop has moved from Mabie Forest (Riks Bike Shed) to set up and advise at Drumlanrig Estate.

'Cycle Drumlanrig' is fast becoming one of the United Kingdom's premier venues for cross-country racing and it already hosts British and Scottish National cycle events.

Drumlanrig is a key visitor destination with lots to see and do. It includes visitor centre, walking, tree trail, activity play, in addition to cycling trails, bike hire / repair and café facilities. Drumlanrig trails are an excellent private / commercial product and as a cycling destination a complementary facility to the FCS' provisions.

4 Dunrobin Estate

The village of Golspie is set within the boundaries of Dunrobin Estate and is better known for its links to the Castle Dunrobin, home of the Earls of Sutherland.

A four stage 30km single track cycle development has been agreed with the Estate owners and completion of the trails is envisaged in early 2006. This is a £300,000 development being driven by the Golspie community. A user agreement with the Dunrobin Estate has been secured. This is a public / private partnership and will include funding from FCS.

Trails will include blue and red loops, a skills park and a black downhill trail. It is expected that this single track centre will be the focus for mountain biking in the very North of Scotland.

5 Glencoe Ski / Mountain Resort

Scotland's first commercial mountain resort is situated on the A82, 26 miles South of Fort William and 23 miles North of Crianlarich and, importantly, only 74 miles or 1½ hours drive time from Glasgow – Scotland's largest centre of population.

The Glencoe Company has plans to develop an all-year downhill mountain biking centre. At this stage these proposals are merely aspirational. However if funding could be secured and market feasibility confirmed a development in the future could materialise.

A temporary downhill trail is being developed for the Scottish Downhill Association Series taking place in Summer 2006. This will be a naturally developed trail. Organisers expect 250 downhill participants.

APPENDIX VII

Urban 'Type' Cycle Developments / Campaigns

URBAN 'TYPE' CYCLE DEVELOPMENTS / CAMPAIGNS

As purpose-built centres have continued to expand so has there been a movement towards cycling facilities within urban woodlands. In this Appendix TRC briefly highlights some key developments within urban area / woodlands, country parks etc.

1 Bellahouston Park

The Glasgow Mountain Bike circuit is located in Pollok Country Park and gives the rider a 'real' mountain bike experience within the City. There are three individual circuits for riders of different skill levels. The green provides an ideal introduction to the novice market, the blue is a first step in steep terrain with varied surfaces and some 'air' and the red route gives the rider a taste of the terrain to be expected in mountainous conditions.

The cycle routes are easily accessible via Sustrans Route 7 and 75 of the National Cycle Network. The mountain bike circuits also have accredited trainers readily available to cyclists. This facility is linked to the Scottish Cycling academy at the Park. They can deliver a range of training from basic control skills through to on-road journey planning or introductory mountain biking. The academy also promotes the disciplines of on-road and velodrome track cycling at performance level.

The facilities at Pollok Country Park are an ideal urban provision and help satisfy the needs of the local area. It is also a facility which can help to ameliorate health and social problems facing Glasgow.

2 Kingdom of Fife Millennium Cycleways

By 2002, over 500km of new safe and signed cycle routes were completed. The routes have been developed for recreation and commuter cycling with all ages and abilities of cyclist being suitably accommodated. The terrain varies from off-road disused railway tracks to routes in forests and from networks in towns to networks along quiet country lanes.

Over £3.7 million of funding has been secured for this four-year project which includes physical infrastructure improvements, route signposting, junction marking, interpretative and information boards.

The Kingdom of Fife benchmark is a good example of government bodies working together to provide facilities for, but also grow, the sport of cycling. Although most of the developments are not 'off-road' it is an example of effective and productive means of promoting and raising cycling's profile. Some of the Fife Millennium Cycleways cross FCS land (see Blairadam).

3 Try Cycling Edinburgh

This is a recently formed organisation set up to campaign and encourage more people to ride bicycles in Edinburgh. It is being supported by all cycling organisations ie Spokes, CTC, Sustrans and Cycling Scotland. It aims to raise awareness and generate increased demand for cycling. It works in conjunction with the local Edinburgh Councils and the Executive / Government / agencies to actively promote cycling as a sustainable transport mode.

APPENDIX VIII

2005 Cycling In Scotland Research (VisitScotland)

2005 CYCLING IN SCOTLAND RESEARCH (VISITSCOTLAND)

VisitScotland, in conjunction with other public agencies (including FCS), commissioned research in 2005 into Scotland's visitor cycling market. The research was carried out in May to July 2005 amongst UK cycling consumers and the UK cycling industry. The main objectives of study were for the client group to gain a better understanding of the cycling and mountain bike market in Scotland. A finalised report has been compiled and an Executive Summary published.

Key findings taken from the Executive Summary are detailed in bullet point format below. It must be stressed that the Appendix summary is not particularly exhaustive and takes on board FCS' initial involvement in the approach to this research study and indeed the conclusions gathered.

Key market findings include:

- Amongst leisure cyclists the destination is the key driver. For Scotland there is a need to raise consideration of Scotland as a holiday destination which offers cycling as part of a package / experience;
- Amongst specialist cyclists the cycling is the most important driver of the holiday re promote Scotland as a top class cycling destination with a variety of new experiences / trails;
- Key priorities for visitor cyclists included the availability of scenery / environment, routes, trails and accommodation;
- Less important priorities for visitor cyclists included provision of other activities and manageability of the weather;
- Key gaps in the Scottish cycling product offering included:
 - Easy routes for casual leisure cyclists;
 - Difficult riding experiences for top end specialists;
 - Information / interpretation enhancement;
 - Infrastructure support (ie accommodation / public transport / food / drink).
- Key opportunities for visitor cycling in Scotland included:
 - Leisure markets – seeking casual experience;
 - Fair-weather breakers;
 - Older children;
 - Young independents.

Key research with the trade and the leisure market was also undertaken. A breakdown of the findings is as follows:

(i) **The Trade**

Ten in-depth cycling interviews were carried out with the cycling trade ie cycle retailers, tour operators, 7stanes, other single track centres etc. Key 'positives' of cycling as seen by the trade are highlighted below:

- Trade generally very positive and upbeat / enthusiastic to the cycling cause;
- Recognise the huge potential and the growing demand for the sport;
- Appreciate high value of FCS flagship centres to raising profile of sport;
- Believe purpose-built centres are some of the best in Europe;
- The variety and beauty of the Scottish landscape is considered a major selling point for visitors;
- Cycling appeals to a wide variety of markets from specialists to independent to cultural as part of a wider visitor experience;
- Opportunities and importance of the World Cup annual event and World Championships 2007 are significant.

A number of negative aspects highlighted by the trade are also detailed below:

- Smaller operators are frustrated by perceived lack of cycling product focus in terms of local infrastructure (tourism, routes) and investment;
- Weather and seasonality are viewed as a major constraint;
- Public transport is an issue;
- Profile of cycling is still not what it could be;
- Cycling maps / routes not always available;
- VisitScotland need to better package product re mountain bike marketing.

(ii) **Key Leisure Cycling Segmentations**

Market research consultants have provided a breakdown of the cycling market, by segment, which is detailed below. Under each, a summary of a typical cyclist's key characteristics and behaviour in this segment is listed. The different behavioural characteristics / skill level of each cycle market segment determines the product they demand / aspire to.

LEISURE CYCLING ATTITUDES AND BEHAVIOUR	
Cycling Segment	Description of Attitudes and Behaviour
Outdoor Pursuit Enthusiasts	Confident, keen cyclist. Have an active and outdoor lifestyle, Male B, C1. Cycle relatively frequently, mountain bike, downhill focus, intermediate and level ability.
Spring Breakers	Passive interest in cycling, with less confidence than the above. Health and fitness-conscious – enjoy relaxing outdoors. Occasional biker, relatively short distance rider, easy level ability.
Outdoor Aspirers	Confident cyclists, high disposable income with passive commitment and sophisticated tastes: quality mountain bike owner, easy to intermediate level.
Gentle Exercisers	Mixed couples, use cycling as practical exercise, high disposable income, cycling for some time with easy level grading.
Active Achievers	Confident, enjoyable, stamina building, wholesome active family, regular all weather cyclists.
Recreationalists	Easy recreational cycling, not adventurous, low risk, coastal / beach holidays, short distance, easy level.
Traditionalists	Easy, healthy, family C1, demographics, short distance, mixed ability, easy.
Fanatics	Passionate, dedicated, serious, tribal, regular, three / five times per week cyclists, technical ability.
Outdoor Spiritualists	Keen or enthusiastic and committed cyclists with active social lifestyle, remote cycling destinations, usually cycle between three / five times per week.
Upgraders	Keen interested cyclists, health fitness drive, recent convert to sport, keen to improve.
Family Addictives	Enthusiastic committed parents, active and outdoor family, part of a range of family activities undertaken annually.

GLOSSARY

GLOSSARY

Abbreviations	
CTC	UK's National Cycling Organisation
EU	European Union
FCS	Forestry Commission Scotland
HIMBA	Highland Mountain Bike Association
IMBA	International Mountain Biking Association
IPS	International Passenger Survey
MBR	MBR Magazine
MTB	Mountain Bike
NTS	National Trust for Scotland
RSPB	Royal Society for the Protection of Birds
SDA	Scottish Downhill Association
SNH	Scottish Natural Heritage
SXC	Scottish Cross Country Association
TRC	Tourism Resources Company
UKTS	United Kingdom Tourism Survey
WIAT	Woods In and Around Towns

Cycling-Related Terminology	
'Getting Air'	Technique of getting bike airborne and then landing and controlling bike safely.
4-Cross	An event which pits 4 riders on the same course from starting gates to finish. There can only be one winner per event.
BaseCamp MTB	Friendly mountain bike shop and cafe located within Laggan Wolftrax Mountain Bike Park.
Berm	An embankment on a trail (cambered corner).
Bike Trials	Slow negotiation of manmade and natural obstacles.
BMX	Form of cycling on bikes, generally with 20 inch wheels. The sport features races on sandy and hilly tracks as well as performances of tricks and stunts on flat ground, wooden ramps / urban parks.
Bunny Hop	A hop that you incorporate into your riding technique so you can clear obstacles such as logs without stopping.
Chicken Runs	Alternative trail line usually where a jump or technical length has been constructed.
Cross-Country	Traditional mountain biking that mixes many types of riding conditions into one course. Requires endurance, fitness and machine control. A cross-country bike is ultra-lightweight with front and sometimes rear suspension.
Deval Karts	Deval Karts have steering and brakes, but no engine. Low pressure balloon tyres to drive down the hill on track.
Dirt Jumping	Similar to BMX racing in that the rider jumps mounds of dirt. It differs in that the jumps are usually much larger and designed to lift the rider high into the air.
Double Jump	Two jumps which can be rolled by novices and intermediates and which can be cleared by experienced riders.
Downhill	Downhill courses are held over steep, downhill terrain, resulting in higher speed and rougher terrain than in cross-country racing. A downhill bike is specialised and has a long travel suspension and powerful brakes. It's a timed race from top to bottom.
Drop-Off	As terrain changes riders will experience natural drop-offs / sudden steep descents McMoab.

GLOSSARY (Cont'd)

Cycling-Related Terminology (Cont'd)	
Epic Riding	All day or multi-day adventures in remote wilderness areas.
Epic Trail	A cycle route which is a link of forest roads, Land Rover tracks and single track. Has good views and diverse terrain and visitor experience. Can be both long and short. Goes through wilderness areas, gives the visitor a real sense of place.
Fall Line	The direction water flows down a slope.
Freeride	Riding without restriction, regulation, rules, a time limit, a particular style, or a specified type of clothing. Involves complimenting the natural routes with minority sections of hand built / manmade structures. Blending all styles and techniques into one flowing ride with few stops along the way.
Fun Park	Non-graded trails suitable for all levels of cyclist.
Gap Jump	Mandatory air – cyclist must get air to successfully clear jump.
Go-Ape	The course consists of rope bridges, zip slides, tarzan swings, and death slides etc.
Gully Monster	The Gully Monster is a 2.4km section of black single track at Ordiequish Forest – Moray.
McMoab	The jewel in Kirroughtree's crown. The McMoab is a snaking 150 metre section of huge granite boulders, packed tightly side-by-side, with blue painted arrows indicating the best line to take all the way across the top of them.
Night Riding	Using battery-powered headlights to ride off-road during night time.
North Shore	Raised platforms of wood, include a variety of assault course-style obstacles. Originally developed for cycling that allowed them to ride over the forest debris / boggy areas etc
Seesaw	A seesaw requires good balance and is great for teaching you the skills needed to take on some of the more advanced MTB obstacles.
Single Track	Single track is a term used to describe a trail that is only wide enough for one person or mountain biker at a time. Single track is the most popular or sought after type of mountain bike trail.
Skills Loop	Technical features along a route ie seesaws, berms, drop-offs etc.
Skills Park	A special use area that features a variety of technical trail features.
Stack Loops	Trail systems designed with many loops 'stacked' on each other, giving users many options for varied routes.
Sustrans	Sustrans is a sustainable transport charity which works on practical projects to encourage people to walk, cycle and use public transport in order to reduce motor traffic and its adverse effects.
Tabletops	Flat sections between a number of jumps.
Tag-a-Long	Childs bike / trailer attached to adult bike.
The Hub in the Forest	Based at Glentress. A mountain bike shop and café which also includes bike shop, repairs and hire. Recently established uplift service and small shop at Innerleithen.
Trailhead	An access point to a trail or trail system usually accompanied by various public facilities.
Triathlon	Triathlon is a combination of swimming, cycling and running – in that order.
Uplift	Machine operated uplift of mountain bikes to top of mountain – most commonly used in Downhill.
Urban Scuttling	Jump / trick riding through urban areas
Velodrome	A banked bicycle racing track. Can be indoors or outdoors, made out of wood (pine) or bitumen usually 333 metres in length.