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## 1.0 INTRODUCTION

- 1.1 Brian Campbell Associates was appointed in November 2003 to prepare a Transport Assessment (TA) for a proposed Mountain Bike Trail Centre in Whinlatter Forest, Keswick, Cumbria. This preliminary TA is one of the several assessments that have been undertaken as part of the feasibility study for the project.
- 1.2 The scope of the study was discussed with an officer of Cumbria County Council and the agreed scope of the TA was as follows:
- i. To determine base traffic flows on the B5292
  - ii. to assess the likely traffic generation of the proposed development;
  - iii. to estimate the volume of generated traffic on the B5292;
  - iv. to assess the impact of this traffic on the local highway network;
  - v. to consider the highway and road safety implications of the access to the proposed car park and of road crossings where the route between sections of trail crosses the B5292; and
  - vi. to consider transport to the site by modes other than car.
- 1.3 The TA is based on data gathered during site visits, traffic flow data obtained from Cumbria County Council and data supplied by Forest Enterprise. In the course of the preliminary work it became clear that there was only a limited set of data of flows on the B5292. For this reason this report reaches preliminary conclusions. It will be necessary to collect further data during the early part of 2004 to provide a basis for testing and assessing impacts of generated traffic in Braithwaite Village. It is anticipated that this additional work would be completed within the project programme and would be available to support a planning application.
- 1.4 The proposed development is fully described in other study reports and the planning application. It includes:
- i. A trailhead consisting of:
    - 100 space car park
    - café with 50 covers and outdoor seating
    - bike and bike hire shop selling spares and biking equipment
    - changing and showers facilities.
  - ii. A series of trails within the Forest Park.
- 1.5 Access to the car park would be located at the point of access to the existing Revelin Moss Car Park.

## **2.0 SITE LOCATION AND LOCAL HIGHWAY NETWORK**

### **Site**

- 2.1 The location of Whinlatter Forest is shown on Figure 1. Figure 2 shows the location of the trailhead and the crossing points for the network of trails.

### **Highway Network**

- 2.2 The highway network is shown on Figures 1 and 2. The A66 (T) is the main route from the M6 to west Cumbria and lies about 2.5km east of the Trailhead site at Revelin Moss. The A66 forms part of the County's primary road network with the section east of the Forest having an AADT of 9900 (source Local Transport Plan).
- 2.3 The B5292 classified road runs west from the village of Braithwaite, through the Forest by Whinlatter Pass to Lorton. The junction of the B5292 onto the A66 is a priority T-junction with a left turn slip for traffic travelling from the Keswick direction. The layout and visibility at this junction is to the standards appropriate for a junction onto a road like the A66 subject to the national speed limit of 60mph. This is the sign-posted junction off the A66 for Braithwaite and Lorton. There is another junction from the A66 into Braithwaite about 280m north of this main access. The northern junction is mainly used by local residents.

### **B5292**

- 2.4 The B5292 passes through Braithwaite village and over Whinlatter Pass to Lorton where it meets the B5289. From Lorton the B5292 runs on to end in Cockermouth. The over most of its length the carriageway of the B5292 between Braithwaite and the proposed trailhead access is generally at least 5.5m wide. The alignment on this section is generally good but there are some tight curves and steep gradients. There is generally good forward visibility.
- 2.5 For the first 480m section through Braithwaite Village from the A66 the carriageway is generally 5-6m wide with a footway. Some on-street parking occurs on this section during the busier parts of the tourist season which reduces the effective width of carriageway. After this 480m the B5292 narrows and the alignment traces a reversed "S" with very tight centreline radii of 10-12m. This "S" section, known as the Braithwaite Narrows, is about 70m long with the carriageway width varying between 4.5m and 3.9m.
- 2.6 This width is adequate to allow oncoming cars to pass one another but is only just sufficient for two on coming light goods vehicles to pass. For larger vehicles the section is effectively one way and such vehicles take up the whole carriageway when turning through the sharp bends at each end of this narrow section. There is very limited forward visibility at the curve at each end of this section.
- 2.7 This section is lined by a terrace on the one side with associated outbuildings on the opposite side. Some of these out-buildings are used as garages. There is a strip of 0.45m between the edge of carriageway to the face of the dwellings. This strip does not form part of the adopted highway. The strip between the carriageway edge and the out-buildings on the other side of the road is about 0.5m wide. It appears that this 0.5m strip is not part of the adopted highway.

### **Car Parking in the Forest Park**

- 2.8 There are five designated car parks off the B5292 within the Forest Park. The viewpoint parking area at Noble Knot has space for about 20 cars and picnic area around 15 spaces. The 25 space Revelin Moss car park is located off B5292 and is a free car park which is sign posted as a picnic area and car park. This is kept as a free car park largely for the benefit of local residents who make frequent but short term visits to the Forest and would otherwise be penalised by a blanket pay and display charging system.
- 2.9 The main car park is a 96 space pay and display area located at the Forest Park Visitor Centre. There is a coach park used by groups making by pre-arranged visits for educational or recreational purposes. The access to this car park has 4.5m x 120m visibility splays. The other forest car parks along the B5292 provide some 50 spaces. This gives a total of around 100 free parking spaces spread over six designated parking areas and 96 pay and display spaces at the visitor centre.
- 2.10 Forest Enterprise will be submitting a separate planning application to construct an additional 30 spaces adjacent to the existing visitor centre car park. This application is likely to be submitted by mid summer 2004.
- 2.11 This access also serves Forest Enterprise's offices and some FE staff accommodation.
- 2.12 The B5292 is subject to the 60mph national speed limit except for the 600m section from the A66 (T) and through Braithwaite Village.

#### **Existing Traffic Flows**

- 2.13 Brian Campbell Associates undertook a traffic count on the B5292 at Woodlands on 03/09/03. Data was also obtained from Capita for a Cumbria County Council census and a local automatic traffic count (ATC) site. This data summarised in Table 1 and presented in Appendix 1.
- 2.14 The County census is carried out each June and shows 12 hour flows in the order of 1100 vehicles and peaks of 145vph. There is no ATC site on the B5292 to provide any data on seasonality of flows. The only nearby site is on the B5289 at Lorton. Given that a high proportion of traffic on both roads is from recreational and tourist activity data from this site should have provided some basis for estimating traffic flows on other weekdays or other times of the year. Unfortunately the data from the ATC station on the B5289 was incomplete and this has meant that estimates have been based on more general knowledge of local traffic patterns.
- 2.15 Because of the lack of available data an ATC was commissioned and carried out over a weekend in mid-March and over the Easter weekend of 2004. The results are summarised in Appendix 1.
- 2.16 It is evident that walkers go from Braithwaite into the Forest Park and walk on the road in the section through the narrows in Braithwaite and on other sections where there is no verge suitable for pedestrians. There is no available data on the numbers of walkers using this route into the Forest Park.

**Public Transport**

- 2.17 The only bus service on the B5292 is the Honiston Rambler, a summer only service that runs two-way on a circuit from Keswick taking in Whinlatter Pass. There are 8 services a day with four in each direction.

**Public Rights of Way**

- 2.18 The B5292 through Whinlatter Forest forms part of the C2C (Coast to Coast) cycle route. The only public footpath within the Forest runs from Thornthwaite to the Forest Visitor Centre. There are no public footpaths crossing the B5292 within the Forest but there are numerous marked forest trails.

### **3.0 EXISTING DEVELOPMENT**

#### **Existing Development**

- 3.1 The existing development in the Forest Park is the visitor centre and café. This is related to the various walks in the Park and in particular to the Osprey Viewing facility.

#### **Visitor Centre**

- 3.2 Forest Enterprise provided records of visits to the main visitor centre car park over 2002. The data, presented in Appendix 2, was analysed to provide an estimate of the proportion of existing traffic flows on the B5292 that can be attributed to visits to the Forest Park.
- 3.3 The data shows that the number of visitors parking in the pay and display car park in June ranged between 510 and 910 a week. This compares to the observed daily 12 hour flow on the B5292 of 1100 vehicles. The data for September showed a range 214 to 879 a week compared to an observed 9 hour flow (0900 to 1800) of 726. This indicates that only a small proportion of cars travelling on the B5292 actually call at the visitor centre in the Forest. The data suggests that fewer than 12% of cars passing through the Forest call and use the car parks.
- 3.4 Forest Enterprise estimates that the Forest Park has 130,000-150,000 visitors each year with around 5500 of those in organised groups that travel by coach or mini-bus.

#### **Timber Extraction**

- 3.5 Whinlatter Forest Park is a working forest with felling taking place according to a programme of forest management. Cut timber is purchased by timber merchants who then become responsible for transporting the timber from the forest. This method of sale means that Forest Enterprise are not able to control the routes used by logging wagons going to and from the forest, though it does seek to encourage logging traffic to avoid passing through Braithwaite.

## **4.0 Proposed Development and Access**

### **The Development**

4.1 The proposed development includes:

- i. the trailhead facilities and trails;
- ii. internal access roads serving trailhead facilities, 100 space car park and alterations to the existing Revelin Moss cars park to maintain a separate visitor parking area.
- iii. an access onto the B5292, located at the point of access to the existing Revelin Moss Car Park, to serve the trailhead and car parking.

4.2 The trailhead facilities would be open all year with opening hours varying depending on the time of year. There will be no charge for using the trails and there would be uncontrolled access to the trails on a “come and use” basis.

4.3 The trailhead car park will be charged by “pay and display” with rates set to be similar to those applying at the existing visitor centre.

### **Access by Car**

4.4 The access to the trailhead will be taken from the B5292 at the same point as the existing access to Revelin Moss Car Park which is 350m east of the access into visitor centre car park.

4.5 The existing Revelin Moss access will be improved to ease the gradient at the entry onto the B5292 and widened to 5.5m to cater for two way flows at the junction. A visibility splay of 4.5m x 215m can be provided at this location.

### **Access by Bus**

4.6 The promotion of the MBT will be designed to encourage access by bike. In addition the promoter will seek to encourage the establishment of a mini-bus link between the trailhead and Keswick. It is envisaged that this service would be operated by a 16 seat bus with a trailer for 16 cycles and run for a two hour period at the beginning and end of each day.

### **Trail Layouts**

4.7 The proposed trails are located to the north and south of the B5292. The crossing points linking trails will be designed so that riders must dismount before crossing the road and be located in positions with good visibility along the B5292.

## 5.0 Trip Generation and Assignment

### Generation

- 5.1 There is very little data available on which to base an estimate of the volumes of traffic that would be generated by the proposed development. Forest Enterprise has carried out surveys of visitors at other similar facilities. In general these surveys were design to determine the characteristics of visitors rather than to determine the total numbers of visitors. However theses surveys, taken with reports of experience at these existing trails, have provided a basis for estimating visitor numbers that has been applied to the economic study carried out by Rural Innovation.
- 5.2 For the purposes of this TA the estimates produced for the economic study have been used as the basis for estimating traffic volumes.
- 5.3 The economic study forecasted that a typical weekend flow would be 300 visitor groups. It has been assumed that a visitor group equates to one vehicle visit to the site. On the basis of Forest Enterprise’s experience at other sites it was assumed that 50% of visits would be short-term and with an average stay of 2.5 hours with the other 50% being all-day visits. It was assumed that all-day visitors would have arrived by 11am with arrivals spread over the three hours from 8am to 11am.
- 5.4 On this basis a typical pattern of arrival was developed and applied to a range of total daily trips of between 150 and 400 car trips. The results of this sensitivity analysis are presented in Appendix 2 and summarised below to show the peak am and pm flows along with the maximum daily accumulation of cars in the Forest’s car parks.

**Table 1 Forecasted Traffic Generation: Base Year**

Daily Visits	Peak Flow Vehicles per Hour		Maximum Accumulation (Vehicles)
	AM	PM	
150	41	38	94
200	55	50	125
250	69	63	156
300	83	75	195
350	96	88	219
400	110	100	260

- 5.5 This analysis indicates that for the busiest day the highest hourly flow would be 110 vph when there were 400 visitor groups (or around 1000 riders) a day. With this number of visitors the demand for car parking by mountain bikers would be around 260 compared to the proposed trailhead car park capacity of 100 spaces at

the trailhead. The balance of parking demand would be accommodated at the other existing car parks within Whinlatter Forest and by managed use of forestry roads to deal with peak demands on the busiest days.

- 5.6 For more typical days when daily visits are expected to fall in the range 200-250 parking demands could be met within the proposed trailhead and other existing car parks.

#### **Trip Assignment and Assessment Flows**

- 5.6 For the purposes of assessing impact in Braithwaite it was assumed that 90% of the traffic would approach from the A66 and pass through the village. This takes account of the significant local catchment population living to the west of Whinlatter for whom this is the most direct route to the trailhead but probably overestimates the numbers of trail users passing through Braithwaite. For the purposes of assessing impact it was assumed that that all visitors would arrive by car. These assumptions will overestimate impacts on Braithwaite.

#### **Construction Traffic**

- 5.7 The construction period would be spread over several months. The earthworks and landscaping operations around the trailhead would not require any exceptional heavy plant. The volumes of construction traffic will generally be less than 20 a day and the route to and from the site subject to some control by means of including specific clauses in construction contracts.

## 6.0 Transport Impacts

6.1 The transport impact of the proposed development has been assessed by considering the effects on:

- the local highway network in general;
- the B5292;
- public transport considerations; and
- the safety of trail riders and pedestrians.

### The Local Highway Network

6.2 The traffic generated by the proposed development is unlikely to exceed 400 car movements a day. This flow is not significant in relation to the existing flows on the nearby A66 which at this point has an AADT of 13400. The additional traffic generated by the proposed development will not have a significant impact on the A66.

### B5292

6.3 The base flow for assessment of impacts on the B5252 has been taken from the ATC data collected over Easter in Braithwaite. This has been taken as a representative of a busy day. This data is summarised in Table 2 which also shows the generated flow for 300 visitor groups a day.

**Table 2 Traffic on B5292 at Braithwaite**

	Peak Baseline Traffic			Generated Traffic			Total
	from east	from west	total	from east	from west	total	
am (10.00-11.00)	63	121	123	68	7	75	Base + Generated 198
pm (15.00-16.00)	171	115	286	14	14	28	314
	Baseline Traffic			Peak Generated Traffic			
am (09.00-10.00)	64	83	145	75	0	75	220
pm (17.00-18.00)	97	61	158	7	68	75	233

6.4 Generated traffic would be around 10% of the highest observed base line flow (15.00-16.00). At other times generated traffic would represent a higher proportion of existing traffic but total flows during these periods would be less than the highest observed hourly flow of 286.

6.5 Thus when base flows are highest generate traffic will be at around 10% of existing flows, the threshold normally accepted where the increase in traffic flow could have a significant impact.

- 6.6 The proposed development is not expected to generate any significant coach or HGV traffic. Given that only additional car movements will be generated the flows on the B5292 will remain well within the accepted capacity of such a road which is generally more than 5.2m wide.
- 6.7 The only exception is the impact of generated traffic at the so-called narrows in Braithwaite. At this location the alignment and width of the B5292 means that traffic delays can occur as larger vehicles pass when the road is effectively reduced to one-way working; or because those with poor driving skills cause temporary blockages when they encounter oncoming traffic and then need to manoeuvre slowly through the narrow section.
- 6.8 The ATC data shows existing flows of up to 286vph passing through the Braithwaite narrows. The automatic counter records average speeds and vehicle headways. None of the data indicates that significant hold ups occurred at this level of flow.

#### **Access to Trailhead**

- 6.9 The proposed access will be located so that a visibility splay of 4.5m x 215m can be achieved which meets current design standards for an access onto a classified road. Given the low hourly flows on the B5292 the generated traffic flows will not result in any significant impact on the capacity of the junction or on highway safety.

#### **Impact on Parking**

- 6.10 The proposed trailhead would have 100 spaces. As can be seen from the sensitivity test the car park will be sufficient to cater for the demand from 375 visitors or around 150 car visits a day. On days when visitor numbers exceed this level parking demands will be accommodated in the visitor centre car park and by controlled parking within the forest roads in the area around the trailhead car park.

#### **Riders and Pedestrians**

- 6.11 The proposed development will probably result in increase volumes of cyclists as some trail riders will choose to cycle to and from the trailhead from Braithwaite or further afield. The low flows on the B5292 are compatible with a mix of cycles and general traffic.
- 6.12 Pedestrian flows are thought to be quite low but in places the narrow road means that there are safety concerns even with existing flows particularly at the narrows in Braithwaite. It is not likely that the proposed development will result in any significant increase in pedestrian flows along the B5292. Mitigation measures for the Braithwaite narrows are discussed below.
- 6.13 As already mentioned none of the trails cross the B5292 and where there are links between trails the road crossing will be located where there is good visibility towards approaching traffic on the B5292.

### **Construction Impacts**

- 6.14 Construction will be spread over some several months. Daily movements of the work force will be much less than the proposed development which itself does not have any significant impact on the highway network.
- 6.15 Movement of large plant will have no significant impact. The delivery of material will be spread over the construction period and have no significant traffic impact.

## **7.0 Mitigation Measures**

### **Alternative Modes of Travel**

- 7.1 Data provided by Forest Enterprise shows that a high proportion of bikers at existing trails are holiday makers staying nearby. Given that this data suggests that there would be a demand for a Keswick shuttle service the promoters of the proposed development will be seeking to establish a mini-bus service to run between Keswick and the trailhead.
- 7.2 This service would be one of the several commercial arrangements that would be established for the operation of trailhead facilities. The promoters envisage that the service would be operated by a 16 seat minibus with a trailer and would be aimed at serving the demand from riders staying in camping, B&B or other accommodation in and around Keswick. The operation would have to be self financing.

### **Alternative Routes**

- 7.3 Consideration was given to possible alternative access routes to the Forest Park that would allow all traffic to approach by a route that avoided Braithwaite altogether. It is understood that there is no other part of the Forest with a boundary onto a highway that would allow such a route to be considered. On this basis no further consideration has been given to such an alternative access route.

### **Car Parking**

- 7.4 Two other aspects of car parking provision have been considered. The first is the possibility that the existing car parking in the Braithwaite Community Centre could be made available to be used by bikers. This would be on the basis that some of the bikers arriving in the area would park at the Community Centre car park and then cycle to the Trailhead and thus reduce the numbers of cars passing through Braithwaite. This option has not been taken forward because use of the Community Centre car park raises highway safety issues that would have to be addressed in some detail.
- 7.5 The other was the possibility raised in discussions with the Parish Council that real-time information signing could be installed on the A66 to advise drivers on the availability of parking spaces within the Forest. The Council's expectation was that when the car parks were full the sign would display a message that would discourage divert drivers from taking the route over Whinlatter Pass. The messages displayed and location of such signs on the A66 would need to be discussed and agreed with the Highways Agency.
- 7.6 It was not considered to be appropriate to raise either of these propositions with the Highways Agency at this stage of the planning process.

### **Mitigation Measures on the B5292**

- 7.7 At present pedestrians headed to and from the Forest walk on the road through the narrows which gives rise to a conflict between traffic and pedestrians even with existing flows. New direction signs could be installed as part of this proposed development showing an alternative route using the road running beside the Royal Oak public house. Although the roads on this route are also narrow traffic flows

are very low and there would be a lower level of conflict between pedestrian and traffic than at the Braithwaite narrows.

- 7.8 Two sets of possible mitigation measures have been considered. The first was the introduction of signal controlled one way working through the Braithwaite narrows. Signals would overcome the problem that arises at present when the section through the narrows is reduced to one-way working as large vehicles pass through or when drivers approach the section on a line that does not allow oncoming vehicles to pass.
- 7.9 In order to minimise delays the signals would rest on all-red and go green for the first vehicle to arrive at a stop line. The signals would include vehicle detection and other measures designed to minimise the risk of long queues forming.
- 7.10 Although signal control would overcome the problems caused when oncoming vehicles cannot pass there would be the disadvantage in that a general delay to all traffic would be introduced in order to control traffic conditions that arise on only a few busy days. This means that although signals would solve an existing problem that arises when large vehicles pass through there would be a resultant impact on all road users by introducing a significant average delay of around 30seconds per vehicle.
- 7.11 This average delay is considered to be unacceptable. In addition there would be safety issues that could not easily be overcome. The most significant of these is that there are junctions of minor local roads and accesses to premises that lie between the points where stop lines and signals can sensibly be located. The presence of Traffic entering the B5292 from these points would encounter traffic that has entered the section under a green signal not expecting to meet other oncoming traffic.
- 7.12 For these reasons signal controlled one-way working at the narrows is not recommended as a practical mitigation measure.
- 7.13 If the impact of generated traffic is found to be of no, or only marginal significance then measures such as additional signing and road markings may be all that is needed.
- 7.14 The increased demand for car parking at the very busiest times of the year may lead to increased verge parking. Forest Enterprise would consider measures to prevent such verge parking if this were to happen on a regular basis and cause problems by damage to the verge or unacceptable restrictions to through traffic. Those steps would be considered in consultation with the highway authority and include measures such as erecting timber bollards in the verge to prevent parking.
- 7.15 There is also a risk that there would be an increase in on-street parking within Braithwaite by trail riders who choose to park in the village and cycle up to the trailhead. Such parking could obstruct the B5292 and it may be necessary to introduce seasonal parking restrictions to control and prevent such parking. Forest Enterprise has confirmed that it would be willing to contribute to the cost of promoting and implementing parking controls along sections of the B5292 between the A66 and village.

## 8.0 Summary and Conclusions

- 8.1 Forest Enterprise propose developing a mountain bike trail in Whinlatter Forest that would comprise:
- trailhead facilities and trails;
  - internal access roads serving trailhead facilities, 200 space car park and alterations to the existing Revelin Moss cars park to maintain a separate visitor parking area.
  - an access onto the B5292, located at the point of access to the existing Revelin Moss Car Park, to serve the trailhead and car parking.
- 8.2 Almost all traffic generated by the proposed development would approach the site on the B5292 from the A66 and pass through the village of Braithwaite. The available traffic flow data shows flows on the B5292 of around 1110 a day with peaks of just under 300 vehicles per hour (vph). It is forecasted that the proposed development would generate between 150 and 400 car visits with a corresponding peak of 90 to 210 vph.
- 8.3 These flows of generated traffic would not have a significant impact on the A66 which carries an annual average daily traffic flow of 13400.
- 8.4 The increase on the B25292 would be significant but the total flows would remain well with the practical capacity of such a road, except at a 90m long narrow section through Braithwaite village which has sharp approach curves and the carriageway reduces to around 4m.
- 8.5 At present the free flow of traffic through this section is affected during the passage of large vehicles or when car drivers find it difficult to deal with passing oncoming vehicles because of the narrow carriageway. The proposed development will not have any significant effect of the incidence of the problem with large vehicles.
- 8.6 The pattern of traffic flows to and from the trailhead is such that generated traffic will be relatively low when base flows are highest. The total flows with generated traffic will be around 10% higher than the current peak base flows of around 300vph. Generated traffic can be accommodated on the B5292 without an significant impact given that total flows will generally be around 300vph. It appears that this two-way flow can also be accommodated at the narrows in Braithwaite. The occasional problems will occur as at present but the increased flows from generated traffic will have a significant impact on the frequency with which this occasional congestion occurs.
- 8.7 The proposal includes 100 pay and display parking spaces which will meet the expected demands over much of the year. At busier time the parking demands from trail users will be accommodated in other car parks within the Forest or overspill parking will be managed by use of existing, currently unused, areas off the forest roads in the rides immediately adjacent to the trailhead.
- 8.8 The access to the proposed car parking and trailhead facilities at Revelin Moss will be located to ensure that sightlines onto the B5292 meet appropriate standards. The low flows on the B5292 mean that the access junction can accept generated traffic flow without there being any significant impact on the free flow of traffic or highway safety.

- 8.9 Various safety measures will be incorporated into the design of the trails and full account taken of guidance on good practice for road crossings on cycle routes. In particular the points where the links between trails cross the B5292 have been located where there is good visibility to approaching traffic. In addition the trail alignments at the entry and exit from crossings will be designed to slow riders down where necessary barriers will be used to force cyclist to dismount as they cross the road.
- 8.10 The promoters of the proposed development will be seeking to establish a mini-bus service with a trailer for bikes to run between Keswick and the trailhead in order to encourage travel to and from the Forest by other modes. It is envisaged that the shuttle service would operate between the trailhead and Keswick with 3-4 round trips an hour.
- 8.11 The developer would also undertake to provide additional road signage as required by the highway authority. This would include additional and improved signage in Braithwaite to direct pedestrians away from using the narrow section of the B5292 as part of a route between Braithwaite and the Forest Park.

# FIGURES

Forest Enterprise  
Proposed Mountain Bike  
Trails  
Whinlatter Forest Park,  
Keswick, Cumbria

## Traffic Count Data

# Appendix 1

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*****
****  ----- HANDI-COUNT -----v99a ****  LOCATION:B5292 Whinlatter Pass
****  MANUAL CLASSIFICATION COUNTS ****  NW of Braithwaite
****  COPYRIGHT ISCA DEVELOPMENTS. ****  File:950549e.isc
*****
UNIT NUMBER ..... 75
CENSUS NUMBER..... 950549
APPROACH DIRECTION. FROM WEST
START CLOCK TIME... 06:56
TIME OF LAST INPUT. 18:59
INTERVAL.(mins).... 30
DAY..... TUESDAY
DATE..... 25:06:2002
OPERATOR Nr.. 2
P/SET PERIOD. 07:00-19:00
WEATHER ..... CLOUDY
-----
START
TIME PCL MCL CAR BUS LGV MGW /-OGV 1-\ /----- OGV 2 -----\ /---TOTALS---\
---- xxx --- --- --- --- --- --- R2X R3X A3/4 A4X A5X A6+ OGV1 OGV2 MVH
-----
0700 0 0 3 0 1 0 0 0 0 0 0 0 0 0 0 4
0730 0 0 5 0 1 0 0 0 0 0 0 0 0 0 0 6
TOT 0 0 8 0 2 0 0 0 0 0 0 0 0 0 0 10
-----
0800 0 1 5 0 0 0 0 0 0 0 0 0 0 0 0 6
0830 0 0 5 0 1 0 1 0 0 0 0 0 0 1 0 7
TOT 0 1 10 0 1 0 1 0 0 0 0 0 0 1 0 13
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0900 0 0 8 1 4 0 0 0 0 0 0 0 0 0 0 13
0930 0 1 15 0 0 0 0 0 0 0 0 0 0 0 0 16
TOT 0 1 23 1 4 0 0 0 0 0 0 0 0 0 0 29
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1000 0 0 23 1 5 0 0 0 0 0 0 0 0 0 0 29
1030 1 0 17 0 1 0 0 0 0 0 0 0 0 0 0 18
TOT 1 0 40 1 6 0 0 0 0 0 0 0 0 0 0 47
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1130 1 0 15 1 2 0 1 0 0 0 0 0 0 1 0 19
TOT 1 0 26 1 8 0 1 0 0 0 0 0 0 1 0 36
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1200 0 0 18 0 1 0 0 0 0 0 0 0 0 0 0 19
1230 0 0 14 2 2 0 0 0 0 0 0 0 0 0 0 18
TOT 0 0 32 2 3 0 0 0 0 0 0 0 0 0 0 37
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1300 0 0 29 1 1 0 0 0 0 0 0 0 0 0 0 31
1330 0 0 18 1 5 0 0 0 0 0 0 0 0 0 0 24
TOT 0 0 47 2 6 0 0 0 0 0 0 0 0 0 0 55
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1430 0 0 39 0 1 0 0 0 0 0 0 0 0 0 0 40
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TOT 4 0 57 3 1 0 1 0 0 0 0 0 0 1 0 62
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1630 0 2 33 0 1 0 0 0 0 0 0 0 0 0 0 36
TOT 0 2 68 1 3 0 0 0 0 0 0 0 0 0 0 74
-----
1700 5 1 31 1 0 0 0 0 0 0 0 0 0 0 0 33
1730 0 0 35 0 0 0 0 0 0 0 0 0 0 0 0 35
TOT 5 1 66 1 0 0 0 0 0 0 0 0 0 0 0 68
-----
1800 0 0 13 0 0 0 0 0 0 0 0 0 0 0 0 13
1830 0 0 13 0 1 0 0 0 0 0 0 0 0 0 0 14
TOT 0 0 26 0 1 0 0 0 0 0 0 0 0 0 0 27
-----
DATA PRODUCED FROM A * HANDI-COUNT * PORTABLE DATA LOGGER
-----
TOT 11 5 471 12 40 0 3 0 0 0 0 0 0 3 0 531
%age 0.9 88.7 2.2 7.5 0.0 0.5 0.0 0.0 0.0 0.0 0.0 0.0 0.5 0.0 100
-----
**** TOTAL MOTOR VEHICLES.....= 531
**** TOTAL HEAVY GOODS VEHICLES= 3= 0.5
-----

```

```

*****
****  ----- HANDI-COUNT -----v99b ****  LOCATION:B5292 Whinlatter Pass
****  MANUAL CLASSIFICATION COUNTS ****  NW of Braithwaite
****  COPYRIGHT ISCA DEVELOPMENTS. ****  File:950549w.isc
*****
UNIT NUMBER ..... 98
CENSUS NUMBER..... 950549
APPROACH DIRECTION. FROM EAST
START CLOCK TIME... 06:57
TIME OF LAST INPUT. 18:58
INTERVAL.(mins).... 30
DAY..... TUESDAY
DATE..... 25:06:2002
OPERATOR Nr.. 2
P/SET PERIOD. 07:00-19:00
WEATHER ..... CLOUDY
-----
START
TIME PCL MCL CAR BUS LGV MGW /-OGV 1-\ /----- OGV 2 -----\ /---TOTALS---\
---- xxx --- --- --- --- --- --- R2X R3X A3/4 A4X A5X A6+ OGV1 OGV2 MVH
-----
0700 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 1
0730 0 0 5 0 0 0 0 0 0 0 0 0 0 0 0 5
TOT 0 0 6 0 0 0 0 0 0 0 0 0 0 0 0 6
-----
0800 0 0 1 0 3 0 1 1 0 0 0 0 0 2 0 6
0830 0 0 7 0 5 0 0 0 0 0 0 0 0 0 0 12
TOT 0 0 8 0 8 0 1 1 0 0 0 0 0 2 0 18
-----
0900 1 0 7 1 2 0 0 0 0 0 0 0 0 0 0 10
0930 0 1 20 1 3 0 0 0 0 0 0 0 0 0 0 25
TOT 1 1 27 2 5 0 0 0 0 0 0 0 0 0 0 35
-----
1000 1 0 34 0 2 0 0 0 0 0 0 0 0 0 0 36
1030 1 0 30 3 2 0 1 0 0 0 0 0 0 1 0 36
TOT 2 0 64 3 4 0 1 0 0 0 0 0 0 1 0 72
-----
1100 0 0 29 0 2 0 2 0 0 0 0 0 0 2 0 33
1130 0 2 29 0 0 0 0 0 0 0 0 0 0 0 0 31
TOT 0 2 58 0 2 0 2 0 0 0 0 0 0 2 0 64
-----
1200 0 0 25 1 1 0 1 0 0 0 0 0 0 1 0 28
1230 1 0 26 0 4 0 0 0 0 0 0 0 0 0 0 30
TOT 1 0 51 1 5 0 1 0 0 0 0 0 0 1 0 58
-----
1300 0 0 27 3 1 0 0 0 0 0 0 0 0 0 0 31
1330 1 0 19 0 1 0 0 0 0 0 0 0 0 0 0 20
TOT 1 0 46 3 2 0 0 0 0 0 0 0 0 0 0 51
-----
1400 1 5 34 0 3 0 0 0 0 0 0 0 0 0 0 42
1430 0 0 27 1 2 0 0 0 0 0 0 0 0 0 0 30
TOT 1 5 61 1 5 0 0 0 0 0 0 0 0 0 0 72
-----
1500 0 1 31 0 1 0 0 0 0 0 0 0 0 0 0 33
1530 0 2 24 0 3 0 0 0 0 0 0 0 0 0 0 29
TOT 0 3 55 0 4 0 0 0 0 0 0 0 0 0 0 62
-----
1600 0 0 21 0 0 0 0 0 0 0 0 0 1 0 1 22
1630 0 0 19 1 0 0 0 0 0 0 0 0 0 0 0 20
TOT 0 0 40 1 0 0 0 0 0 0 0 0 1 0 1 42
-----
1700 0 0 17 0 2 0 0 0 0 0 0 0 0 0 0 19
1730 0 0 15 0 0 0 0 0 0 0 0 0 0 0 0 15
TOT 0 0 32 0 2 0 0 0 0 0 0 0 0 0 0 34
-----
1800 0 0 16 0 0 0 0 0 0 0 0 0 0 0 0 16
1830 0 1 9 0 1 0 0 1 0 0 0 0 0 1 0 12
TOT 0 1 25 0 1 0 0 1 0 0 0 0 0 1 0 28
-----
DATA PRODUCED FROM A * HANDI-COUNT * PORTABLE DATA LOGGER
-----
TOT 6 12 473 11 38 0 5 2 0 0 0 0 1 7 1 542
%age 2.2 87.2 2.0 7.0 0.0 0.9 0.3 0.0 0.0 0.0 0.1 1.2 0.1 100
-----
**** TOTAL MOTOR VEHICLES.....= 542
**** TOTAL HEAVY GOODS VEHICLES= 8= 1.4
-----

```

\*\*\*\*\* CAPITAdbs  
\*\*\*\* ----- HANDI-COUNT -----v99b \*\*\*\* LOCATIONS B5292 WHINLATTER PASS  
\*\*\*\* MANUAL CLASSIFICATION COUNTS \*\*\*\*  
\*\*\*\* COPYRIGHT ISCA DEVELOPMENTS. \*\*\*\*  
\*\*\*\*\* File 950549W.isc

UNIT NUMBER ..... 14  
CENSUS NUMBER..... 950549  
APPROACH DIRECTION. FROM EAST  
START CLOCK TIME... 06:55  
TIME OF LAST INPUT. 18:59  
INTERVAL.(mins).... 30  
DAY..... TUESDAY  
DATE..... 24:06:2003  
OPERATOR Nr.. 8  
P/SET PERIOD. 07:00-19:00  
WEATHER ..... FINE

START	PCL	MCL	CAR	BUS	LGV	MGV	R2X	R3X	A3/4	A4X	A5X	A6+	OGV1	OGV2	MVH
TIME	xxx														
0700	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
0730	0	1	2	0	1	0	0	0	0	0	0	2	0	2	6
TOT	0	1	2	0	3	0	0	0	0	0	0	2	0	2	8
0800	0	0	2	0	4	0	0	0	0	0	0	0	0	0	6
0830	0	0	6	0	2	0	0	0	0	0	0	0	0	0	8
TOT	0	0	8	0	6	0	0	0	0	0	0	0	0	0	14
0900	0	0	9	2	0	0	0	0	0	0	0	0	0	0	11
0930	0	0	29	0	1	0	0	0	0	0	0	0	0	0	30
TOT	0	0	38	2	1	0	0	0	0	0	0	0	0	0	41
1000	0	0	26	2	5	0	0	0	0	0	0	0	0	0	33
1030	1	1	37	3	1	0	0	0	0	0	0	0	0	0	42
TOT	1	1	63	5	6	0	0	0	0	0	0	0	0	0	75
1100	0	0	34	0	4	0	0	0	0	0	0	0	0	0	38
1130	1	0	33	1	2	0	1	0	0	0	0	1	1	1	38
TOT	1	0	67	1	6	0	1	0	0	0	0	1	1	1	76
1200	0	1	36	2	1	0	0	0	0	0	0	0	0	0	40
1230	0	0	35	0	0	0	0	0	0	0	0	0	0	0	35
TOT	0	1	71	2	1	0	0	0	0	0	0	0	0	0	75
1300	0	1	22	0	3	0	0	0	0	0	0	0	0	0	26
1330	0	1	25	1	2	0	1	0	0	0	0	0	1	0	30
TOT	0	2	47	1	5	0	1	0	0	0	0	0	1	0	56
1400	0	0	31	1	0	0	0	0	0	0	0	1	0	1	33
1430	0	1	29	1	3	0	1	0	0	0	0	0	1	0	35
TOT	0	1	60	2	3	0	1	0	0	0	0	1	1	1	68
1500	0	0	24	1	1	0	0	0	0	0	0	0	0	0	26
1530	0	1	22	0	0	0	0	0	0	0	0	0	0	0	23
TOT	0	1	46	1	1	0	0	0	0	0	0	0	0	0	49
1600	0	0	22	0	1	0	0	0	0	0	0	0	0	0	23
1630	9	0	17	1	1	0	0	0	0	0	0	0	0	0	19
TOT	9	0	39	1	2	0	0	0	0	0	0	0	0	0	42
1700	0	0	20	0	0	0	0	0	0	0	0	0	0	0	20
1730	1	1	16	1	1	0	0	0	0	0	0	0	0	0	19
TOT	1	1	36	1	1	0	0	0	0	0	0	0	0	0	39
1800	1	0	16	0	2	0	0	2	0	0	0	1	2	1	21
1830	2	1	18	0	3	0	0	0	0	0	0	0	0	0	22
TOT	3	1	34	0	5	0	0	2	0	0	0	1	2	1	43

DATA PRODUCED FROM A \* HANDI-COUNT \* PORTABLE DATA LOGGER

TOT	15	9	511	16	40	0	3	2	0	0	0	5	5	5	586
%age		1.5	87.2	2.7	6.8	0.0	0.5	0.3	0.0	0.0	0.0	0.8	0.8	0.8	100

\*\*\*\* TOTAL MOTOR VEHICLES.....= 586  
\*\*\*\* TOTAL HEAVY GOODS VEHICLES= 10= 1.7

```

***** CAPITAdbs
**** ----- HANDI-COUNT -----v99b **** LOCATION:B5292 Whinlatter Pass
**** MANUAL CLASSIFICATION COUNTS ****
**** COPYRIGHT ISCA DEVELOPMENTS. ****
***** File 950549.isc
UNIT NUMBER ..... 26
CENSUS NUMBER..... 950549 DAY..... TUESDAY
APPROACH DIRECTION. FROM WEST DATE..... 24:06:2003
START CLOCK TIME... 06:55 OPERATOR Nr.. 8
TIME OF LAST INPUT. 18:54 P/SET PERIOD. 07:00-19:00
INTERVAL.(mins).... 30 WEATHER ..... FINE
-----
START
TIME PCL MCL CAR BUS LGV MGV /-OGV 1-\ /----- OGV 2 -----\ /---TOTALS---\
---- xxx --- --- --- --- --- --- R2X R3X A3/4 A4X A5X A6+ OGV1 OGV2 MVH
-----
0700 0 0 2 0 0 0 0 0 0 0 0 0 0 0 0 2
0730 0 0 1 0 2 0 0 0 0 0 0 0 0 0 0 3
TOT 0 0 3 0 2 0 0 0 0 0 0 0 0 0 0 5
-----
0800 1 0 7 0 5 0 0 0 0 0 0 0 1 0 1 13
0830 0 0 8 0 1 0 0 0 0 0 0 0 0 0 0 9
TOT 1 0 15 0 6 0 0 0 0 0 0 0 1 0 1 22
-----
0900 0 0 4 1 0 0 1 0 0 0 0 0 0 1 0 6
0930 0 0 13 0 1 0 0 0 0 0 0 0 0 0 0 14
TOT 0 0 17 1 1 0 1 0 0 0 0 0 0 1 0 20
-----
1000 0 0 11 1 1 0 0 0 0 0 0 0 0 0 0 13
1030 0 0 12 0 1 0 0 0 0 0 0 0 0 0 0 13
TOT 0 0 23 1 2 0 0 0 0 0 0 0 0 0 0 26
-----
1100 0 0 16 0 0 0 0 0 0 0 0 0 0 0 0 16
1130 0 1 24 2 2 0 1 0 0 0 0 0 1 1 1 31
TOT 0 1 40 2 2 0 1 0 0 0 0 0 1 1 1 47
-----
1200 0 0 21 1 1 0 0 0 0 0 0 0 0 0 0 23
1230 1 0 24 1 1 0 0 0 0 0 0 0 1 0 1 27
TOT 1 0 45 2 2 0 0 0 0 0 0 0 1 0 1 50
-----
1300 1 0 19 0 1 0 0 0 0 0 0 0 0 0 0 20
1330 0 0 36 0 1 0 1 0 0 0 0 0 0 1 0 38
TOT 1 0 55 0 2 0 1 0 0 0 0 0 0 1 0 58
-----
1400 0 1 27 2 0 0 0 0 0 0 0 0 0 0 0 30
1430 0 0 29 2 2 0 0 0 0 0 0 0 0 0 0 33
TOT 0 1 56 4 2 0 0 0 0 0 0 0 0 0 0 63
-----
1500 0 0 28 0 1 0 0 0 0 0 0 0 0 0 0 29
1530 0 0 31 2 1 0 1 0 0 0 0 0 1 1 1 36
TOT 0 0 59 2 2 0 1 0 0 0 0 0 1 1 1 65
-----
1600 0 0 37 1 1 0 0 0 0 0 0 0 0 0 0 39
1630 0 1 45 2 5 0 0 0 0 0 0 0 0 0 0 53
TOT 0 1 82 3 6 0 0 0 0 0 0 0 0 0 0 92
-----
1700 0 1 35 1 2 0 0 0 0 0 0 0 0 0 0 39
1730 1 0 23 0 1 0 0 0 0 0 0 0 0 0 0 24
TOT 1 1 58 1 3 0 0 0 0 0 0 0 0 0 0 63
-----
1800 0 0 10 0 1 0 0 0 0 0 0 0 0 0 0 11
1830 9 0 11 0 0 0 0 0 0 0 0 0 0 0 0 11
TOT 9 0 21 0 1 0 0 0 0 0 0 0 0 0 0 22
-----
DATA PRODUCED FROM A * HANDI-COUNT * PORTABLE DATA LOGGER
TOT 13 4 474 16 31 0 4 0 0 0 0 0 4 4 4 533
%age 0.7 88.9 3.0 5.8 0.0 0.7 0.0 0.0 0.0 0.0 0.7 0.7 0.7 100
-----
**** TOTAL MOTOR VEHICLES.....= 533
**** TOTAL HEAVY GOODS VEHICLES= 8= 1.5
-----

```

Survey by Brian Campbell Associates 03/09/03

time hour beginning	Cars		HGVs		Cycles		Total Vehicles		Total Vehicles Two- way
	From East	From West	From East	From West	From East	From West	From East	From West	
09:00	33	24	0	0	1	1	33	24	57
10:00	45	22	0	0	2		45	22	67
11:00	54	34	0	0	2	4	54	34	88
12:00	47	21	0	0	1		47	21	68
13:00	28	36	0	1	1	1	28	37	65
14:00	38	63	0	1	1		38	64	102
15:00	48	44	0	1	2	4	48	45	93
16:00	33	53	0	1		2	33	54	87
17:00	36	62	0	1	1	4	36	63	99
TOTAL	362	359	0	5	11	16	362	364	726

Automatic Traffic Counts B5292

Forest Enterprise, Proposed Mountain Bike trails, Whinlatter Forest

April 2004		Easter Weekend																	
		Sat 20/03/2004			Sun 21/03/2004			Fri 09/04/2004			Sat 10/04/2004			Sun 11/04/2004			Mon 12/04/2004		
		Direction			Direction			Direction			Direction			Direction			Direction		
		From East	From West	2-way	From East	From West	2-way	From East	From West	2-way	From East	From West	2-way	From East	From West	2-way	From East	From West	2-way
08:00		7	8	15	7	5	12	9	9	18	8	10	18	8	15	23	6	6	12
	Hour	18	20	38	15	10	25	19	18	37	29	30	59	19	35	54	17	24	41
		15	23	38	39	10	49	19	22	41	27	36	63	27	34	61	36	28	64
09:00		16	19	35	32	21	53	35	50	85	37	47	84	24	51	75	31	45	76
	Hour	31	42	73	71	31	102	54	72	126	64	83	147	51	85	136	67	73	140
		32	18	50	37	27	64	25	51	76	40	37	77	30	65	95	45	55	100
10:00		17	26	43	27	26	53	30	63	93	37	46	83	33	56	89	38	48	86
	Hour	49	44	93	64	53	117	55	114	169	77	83	160	63	121	184	83	103	186

Transport Assessment

Forest Enterprise  
Proposed Mountain Bike  
Trails  
Whinlatter Forest Park,  
Keswick, Cumbria

1 1 : 0 11 0 :3 0 0	26	26	52	35	29	64	27	47	74	39	51	90	35	57	92	30	61	91
1 1 : 3 12 0 :0 0 0	33	24	57	28	39	67	39	60	99	27	51	78	31	53	84	33	58	91
Ho ur	59	50	109	63	68	131	66	107	173	66	102	168	66	110	176	63	119	182
1 2 : 0 12 0 :3 0 0	39	14	53	46	28	74	24	53	77	25	45	70	28	65	93	32	49	81
1 2 : 3 13 0 :0 0 0	19	14	33	25	36	61	45	41	86	36	50	86	38	45	83	55	49	104
Ho ur	58	28	86	71	64	135	69	94	163	61	95	156	66	110	176	87	98	185
1 3 : 0 13 0 :3 0 0	32	26	58	28	40	68	42	50	92	29	57	86	44	56	100	50	48	98
1 3 : 3 14 0 :0 0 0	26	28	54	22	34	56	48	46	94	55	71	126	67	59	126	55	67	122

Forest Enterprise  
Proposed Mountain Bike  
Trails  
Whinlatter Forest Park,  
Keswick, Cumbria

Hour	58	54	112	50	74	124	90	96	186	84	128	212	111	115	226	105	115	220
14:00 - 14:30	26	21	47	35	38	73	48	50	98	56	44	100	58	59	117	73	60	133
14:30 - 15:00	27	26	53	33	46	79	78	58	136	52	53	105	66	56	122	74	62	136
Hour	53	47	100	68	84	152	126	108	234	108	97	205	124	115	239	147	122	269
15:00 - 15:30	26	20	46	21	26	47	53	64	117	85	54	139	81	67	148	78	53	131
15:30 - 16:00	22	18	40	29	19	48	62	40	102	53	40	93	90	48	138	64	43	107
Hour	48	38	86	50	45	95	115	104	219	138	94	232	171	115	286	142	96	238
16:00 - 16:30	21	16	37	23	23	46	57	32	89	62	43	105	68	45	113	63	42	105

Forest Enterprise  
Proposed Mountain Bike  
Trails  
Whinlatter Forest Park,  
Keswick, Cumbria

16:30:00	15	15	30	20	21	41	47	45	92	62	37	99	74	41	115	60	32	92
Hour	36	31	67	43	44	87	104	77	181	124	80	204	142	86	228	123	74	197
17:00:00	12	17	29	15	14	29	27	27	54	28	35	63	53	37	90	31	40	71
17:30:00	16	17	33	9	13	22	26	33	59	36	37	73	44	24	68	32	26	58
Hour	28	34	62	24	27	51	53	60	113	64	72	136	97	61	158	63	66	129
12hr	438	388	826	519	500	1019	751	850	1601	815	864	1679	910	953	1863	897	890	1787



Forest Enterprise  
Proposed Mountain Bike  
Trails  
Whinlatter Forest Park,  
Keswick, Cumbria

## Traffic Generation and Sensitivity Analysis

# APPENDIX 2

PATTERNS OF ARRIVAL AND DEPARTURE

NOTES:

- 1 FE data from other montain bike trails shows that 50% of visits are half day and 50% all day.
- 2 The pattern of arrival and departure in the table is based on the assumption that this applies for Whinlatter.
- 3 It was assumed that all day users arrive between 8am and 11am and leave between 4pm and 6pm.
- 4 Half day visits were assumed to average two hours with arrivals spread over the period 8am to 5pm.

Hour Beginning	Pattern of Arrival/Departure					
	Half day visitors		All day visitors		All day pattern	
	in	out	in	out	in	out
8	5.0%	0.0%	25.0%	0.0%	15.0%	0.0%
9	15.0%	0.0%	40.0%	0.0%	27.5%	0.0%
10	15.0%	5.0%	35.0%	0.0%	25.0%	2.5%
11	10.0%	15.0%	0.0%	0.0%	5.0%	7.5%
12	15.0%	15.0%	0.0%	0.0%	7.5%	7.5%
13	10.0%	10.0%	0.0%	0.0%	5.0%	5.0%
14	10.0%	15.0%	0.0%	0.0%	5.0%	7.5%
15	10.0%	10.0%	0.0%	0.0%	5.0%	5.0%
16	5.0%	10.0%	0.0%	35.0%	2.5%	22.5%
17	5.0%	10.0%	0.0%	40.0%	2.5%	25.0%
18	0.0%	10.0%	0.0%	25.0%	0.0%	17.5%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

SENSITIVITY TESTS FOR DIFFERENT  
DAILY TOTALS

Daily Visits			150	Daily Visits			200
Hour	All Day		Accumulation	Hour	All Day		Accumulation
	in	out			in	out	
8	23	0	23	8	30	0	30
9	41	0	64	9	55	0	85
10	38	4	98	10	50	5	130
11	8	11	94	11	10	15	125
12	11	11	94	12	15	15	125
13	8	8	94	13	10	10	125
14	8	11	90	14	10	15	120
15	8	8	90	15	10	10	120
16	4	34	60	16	5	45	80
17	4	38	26	17	5	50	35
18	0	26	0	18	0	35	0

Daily Visits			250	Daily Visits			300
Hour	All Day		Accumulation	Hour	All Day		Accumulation
	in	out			in	out	
8	38	0	38	8	45	0	45
9	69	0	106	9	83	0	128
10	63	6	163	10	75	8	195
11	13	19	156	11	15	23	188
12	19	19	156	12	23	23	188
13	13	13	156	13	15	15	188
14	13	19	150	14	15	23	180
15	13	13	150	15	15	15	180
16	6	56	100	16	8	68	120
17	6	63	44	17	8	75	53
18	0	44	0	18	0	53	0

Daily Visits			350	Daily Visits			400
Hour	All Day		Accumulation	Hour	All Day		Accumulation
	in	out			in	out	
8	53	0	53	8	60	0	60
9	96	0	149	9	110	0	170
10	88	9	228	10	100	10	260
11	18	26	219	11	20	30	250
12	26	26	219	12	30	30	250
13	18	18	219	13	20	20	250
14	18	26	210	14	20	30	240
15	18	18	210	15	20	20	240
16	9	79	140	16	10	90	160
17	9	88	61	17	10	100	70
18	0	61	0	18	0	70	0