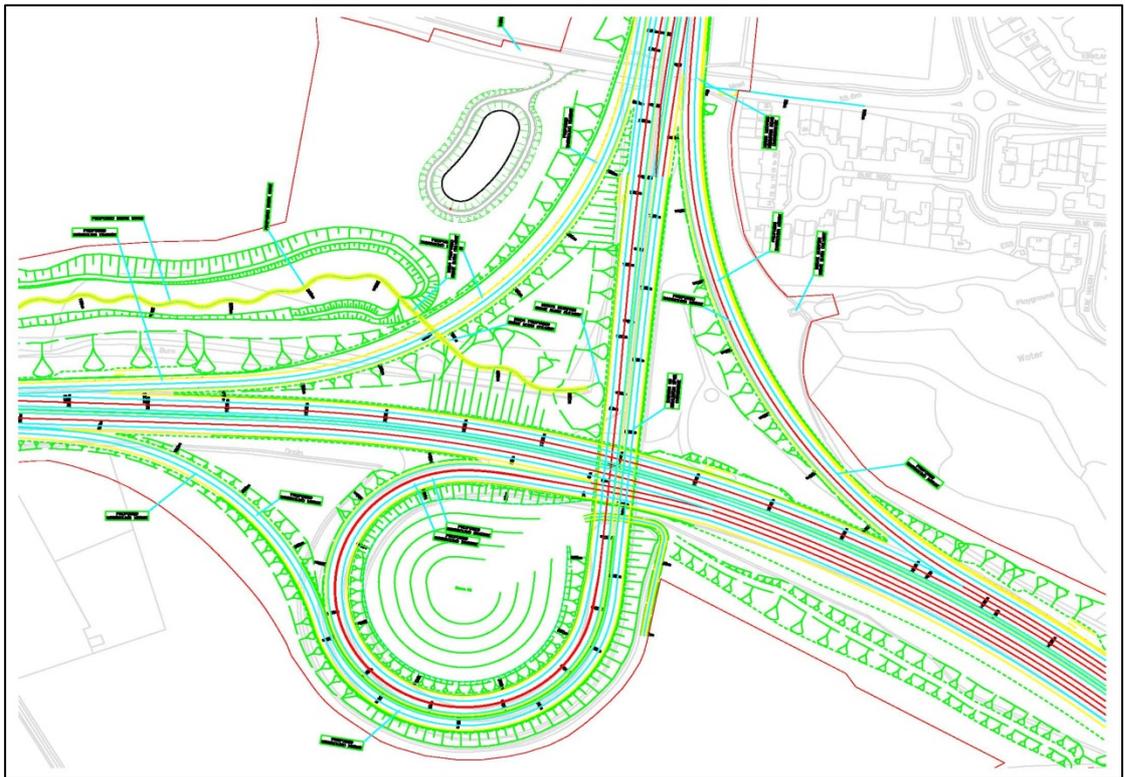


# FORTH REPLACEMENT CROSSING M9 Junction 1a – Project Quality Plan: Volume 4 GREEN TRAVEL PLAN



# FORTH REPLACEMENT CROSSING M9 JUNCTION A1

## GREEN TRAVEL PLAN

**CONTROLLED DOCUMENT**  
**(Unless Printed)**

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	Name	Signature	Date
<b>Prepared by:</b>	Roland Tarrant		April 2012
<b>Checked SRB:</b>	Paraic McCarthy		April 2012
<b>SRB Approved:</b>	Paraic McCarthy		April 2012

REVISION RECORD					
Rev	Date	By	Summary of Changes	Chkd	Aprvd
02	01-04-12	RT	To Take into account comments from EDT in CR00194	RT	PMc

**Forth Replacement Crossing**

**Project Office**

**King Malcolm Drive**

**Rosyth**

**KY11 2DY**

## **Green Travel Plan**

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## Introduction

A Green Travel Plan (GTP) provides a series of voluntary travel behaviour change initiatives aimed at encouraging the use of more sustainable transport such as walking, cycling, car-pooling and public transport.

The Travel Plan aims to achieve travel behaviour change through raising awareness of alternatives to motor vehicle use. The development of the M9J1a Green Travel Plan will focus on providing better information, offering incentives and mode specific actions to optimise the use of sustainable travel (public transport, cycling, walking and car pooling) by staff.

The Green Travel Plan specifically looks at how people are travelling to, from and during work and what can be done to replace single occupancy motor vehicle trips with sustainable trips.

As the main contractor on the M9J1a Project, SRB Civil Engineering Ltd. can enhance the choices available to employees and visitors in a way that promotes health, safety and environmentally sustainable outcomes.

People choose their mode of transport based on habit, social pressures, personal constraints and the availability of particular transport options, while, in certain situations, the private motor vehicle is the only suitable mode of transport. The potential to change work related travel is affected by several factors, including work shifts, the accessibility of the workplace by more sustainable modes, car parking provision, employee interest in changing and organisational support for change.

The Green Travel Plan is not anti-car or plane, some trips cannot be made by any other mode; however, one of the key aspects of changing travel behaviour is that we only need to change a few of our weekly single occupancy motor vehicle trips to sustainable forms of transport in order to reduce greenhouse gas emissions, traffic congestion and parking problems and gain from the social, economic, environmental and health benefits of walking, cycling, car pooling and catching public transport. Someone currently driving to and from work everyday making the change to using a more environmentally friendly mode of transport for just one day a week can reduce their vehicle kilometres travelled (VKT) by up to 20%.

### Why implement a Green Travel Plan?

Traffic congestion, parking problems, greenhouse gas emissions and fuel prices are a few of the reasons why organisations choose to implement Green Travel Plans.

Generally, organisations that are proactive and implement a Green Travel Plan before problems arise can ensure that traffic issues at their particular site are well managed and potential problems avoided.

A key aspect of the Green Travel Plan is that individuals need only change a few of their weekly single occupancy motor vehicle trips to sustainable forms of transport to have a marked impact on their health, traffic congestion and greenhouse gas emissions.

There are also a number of potential benefits for the SRB Civil Engineering Ltd. including:

#### **Staff:**

- Increased health, happiness and fitness
- Reduced stress
- Potential Cost Savings

***SRB Civil Engineering Ltd:***

- Happier, healthier, more productive workforce
- Reduced traffic congestion at peak hours at site entrances
- Improved access and parking for visitors
- Improved corporate image through promotion as an innovative and environmentally aware organisation
- Potential Cost Savings

***Community:***

- Setting a positive example and challenging other organisations to promote sustainable transport.
- Reduced traffic congestion in the vicinity.
- Reduced need for additional car parking.
- Reduced toxic exhaust fumes and particles.
- More people walking and cycling creates a sense of community as it provides greater opportunities for social interaction.
- An organisation which is accessible by a range of transport options does not disadvantage any members of society.

***Environment:***

- Reduction in greenhouse gas emissions, air and noise pollution.
- Reduction in water pollution created by runoff from impervious road surfaces

A Green Travel Plan is required as per Section 4.6.7 of the Code of Construction Practice for the M9J1a Project. The Green Travel Plan will sit within **The Project Quality Plan: Volume 4 Construction Environmental Management Plan, Appendix D – SRB Management Plans**

## **1.10 Project Scope and Background**

### **General Description**

The construction of the M9 Junction 1A comprises a grade separated junction arrangement, which is capable of facilitating all movement access between the M9 and the M9 Spur. Located on the site of the existing junction, the new arrangement makes best use of existing infrastructure whilst minimising the amount of new land-take required in its implementation. The east facing functionality provided by the existing junction is enhanced through revisions to both the existing loop arrangement, from the M9 westbound to the M9 Spur, and the slip road from the M9 Spur to the M9 eastbound. Each of these links will provide two general traffic lanes, assisting traffic flow through the junction area.

To better serve West Lothian traffic, the re-design of M9 Junction 1A will incorporate west facing slip roads, a feature not encompassed within the existing junction design. The provision of these slip roads will remove the current requirement for traffic to navigate Newbridge Roundabout when making this movement.

In the provision of the revised M9 Junction 1A, whilst new structures will be required to carry new sections of road and realigned watercourses, where possible, existing structures will be utilised or widened.

To complement the improvements to the junction, the section of the M9 between Newbridge Roundabout (M9 Junction 1) and M9 Junction 1A is to be widened to provide four lanes of traffic in the southbound direction and an auxiliary slip road lane as far as the River Almond underbridge northbound. The interaction of traffic between these junctions is a known constraint on the operation of the strategic network, weaving being a particular issue. The southbound widening of the M9 in tandem with the provision of two lane merge and diverge slip roads at Newbridge Roundabout and M9 Junction 1A will improve the connectivity and operational performance of the network through this section.

The Works shall include, but shall not be limited to, the following

- (a) provision of new west facing link roads between the M9 and the M9 Spur, including construction of approximately 800 metres of new single lane link roads plus hard shoulders;
- (b) improvements to the existing east facing link roads including widening both to accommodate two lanes plus hard shoulders;
- (c) widening of the existing M9 between Junction 1a and the River Almond crossing (towards Newbridge Junction) over a length of approximately 1 kilometre, incorporating a new auxiliary lane in the westbound direction and the addition of a lane in the eastbound direction;
- (d) construction of a new overbridge adjacent to the existing Junction 1a overbridge, with a total length of approximately 86 metres;
- (e) widening of the existing Overton Road underbridge on the M9 by approximately 6 metres;
- (f) widening of the existing B9080 underbridge on the M9 Spur by approximately 23 metres;
- (g) diversion of Swine Burn including a new culvert beneath the eastbound diverge link road of approximately 70 metres length;
- (h) road boundary fencing and vehicle restraint systems;
- (i) road drainage infrastructure and outfalls comprising a sustainable drainage system ("SUDS");
- (j) earthworks and ground improvement works;
- (k) kerbs, footways and paved areas;
- (l) traffic signs and road lighting;
- (m) provision of ITS facilities, as detailed in Part C, at Gantry Sites within the LMA. The Contractor shall provide all of the infrastructure, including, without limitation: Gantry structure, maintenance hard standing, hard landscaping, ducting, cabinet sites, earthworks, landscaping, VRS, drainage, road markings, signs and the like;

- (n) diversionary and other similar works for Statutory Undertakers, private utility companies and the like;
- (o) environmental and landscaping measures;
- (p) Accommodation Works, and
- (q) all other works generally associated with a Trunk Road scheme.

Two Number Scheme Layout Drawings are attached in **Appendix A**

## 1.11 Objectives

The purpose of this Green Travel Plan is to assist SRB to systematically investigate transport options across the whole organisation and assess where more sustainable transport alternatives may be used. The extent to which the Green Travel Plan can be implemented depend on the following factors:

- Organisation size
- Location of organisation
- Resources available to implement the travel behaviour change initiatives
- Attitudes within the organisation towards changing travel behaviour

The five main objectives of the Green Travel Plan are to:

1. Reduce vehicle kilometres travelled (VKT) to and from the M9J1a Compound, particularly single occupancy vehicle trips
2. Reduce VKT for work related trips
3. Increase staff use of sustainable transport modes- walking, cycling, public transport, carpooling
4. Ensure that staff are informed on the opportunities and benefits of using sustainable transport
5. Providing the necessary facilities to enable personnel to walk and cycle to work
6. Promote SRB Civil Engineering as an innovative and environmentally aware organisation.

Based on the Before Travel Survey results performance indicators in the following five objective areas are proposed.

Objective Area	Percentage Change
1 Vehicle Trips	Reduction in Vehicle Kilometres Travelled (VKT) by 10%
2 Cycling /Walking	Increase cycling / walking trips to, from and during work by 8%
3 Public Transport	Increase in public transport trips to and from work by 5%
4 Car Pooling	Increase car pool trips by 5%

The achievement of these Objectives will be measured with an After Travel Survey, which will be conducted in May 2012.

## 1.12 Policy

SRB Directors from each of the SRB Partners will sign a letter of agreement to implement a Green Travel Plan for the Scheme. The draft of this letter is included in **Appendix B**.

Senior Management will endorse the Plan and activities arranged as a result.

## 1.13 Green Travel Co-ordinator / Working Group

Roland Tarrant, the Project Sustainability Manager will take the role of the Green Travel Plan Co-ordinator (GTPC). He will be the main contact person for the programme.

A Working Group will be formed from the Project Team and will consist of the following interested personnel:

- Roland Tarrant - Sustainability Manager **SRB**
- Michael O'Connell - Quality **SRB**
- Barry O' Riordan - Quality and Environmental **SRB**
- Peter Byrne - Environmental Manager **SRB**
- Barry Lennie - Design Site Representative **Gifford**
- Rebecca Spalton - Environmental Scientist **EDT**

The GTPC will arrange meetings with the site management and staff and invite them to participate in the programme. The Group will meet at two month intervals. The primary aims of the Working Group are to provide:

- Provide suggestions and ideas
- Provide feedback on activities and initiatives
- Review material
- Assist Green TP Coordinator to promote activities
- Assist Green TP Coordinator to disseminate information

## 1.14 Investigate Current Travel Patterns

The GTPC will carry out an initial assessment of the current travel patterns at the M9J1a Site, conduct a Site Assessment and surveying of staff to capture this information.

### 1.14.1 Site Assessment

The site assessment will assist in identifying the good and bad aspects of existing physical and social factors at your location. These could either inhibit or enable walking, cycling, carpooling and catching public transport. The aim of the site assessment is to understand the existing transport provisions in and around your site. This process may also identify the need for new or improved infrastructure services or maintenance of existing infrastructure.

### 1.14.2 Staff Travel Survey

The survey will provide data on:

- How staff travel to, from and during work.
- Why people travel the way they do and what would encourage them to use more sustainable transport.
- The vehicle kilometres travelled (VKT) to, from and during work.

An assessment of current travel patterns was carried out on the 14<sup>th</sup> December 2011. The format is included in **Appendix C**.

## **1.15 Development of Plan**

This Plan has been developed as a means to progress the idea of sustainable transport, not only within the M9J1a but as a wider attempt to promote sustainable modes of transport within SRB Civil Engineering. To achieve this will require a mix of short and long term goals. Suitable measures that will support the key objectives are detailed below:

### **1.15.1 Suitable measures**

#### **1.15.1.1 Car use**

The Green Travel Plan is not anti-car and will be promoted as a friendly rival to the car. For some members of staff, their jobs will not facilitate them using other modes of transport e.g. the site Surveyor will have expensive equipment in their vehicle and be required to work flexible hours. This means it may not be practical for these persons to walk or cycle to work.

##### **1.15.1.1.1 Eco-driving**

Information will be provided to all staff regarding how efficient driving will save money and emissions.

##### **1.15.1.2 Public Transport**

Information of local bus routes will be placed on the site noticeboards including prices of flexitickets, special offers etc.

##### **1.15.1.3 Car Parking Management**

An off-road car park will be used to reduce the amount of congestion during peak access times. A 30mph speed limit will be used to reduce the risk of accident to walkers, motorists and cyclists on the approach road leading to the site.

##### **1.15.1.4 Cycling and Walking**

Dedicated lock-up facilities will be provided for staff that wish to cycle to work. Male and female shower facilities will also be provided.

##### **1.15.1.5 Working Arrangements**

Management will listen to any constructive suggestions whereby persons can work from home.

#### **1.15.1.6 Information Request Sheets on Walking, Cycling, Public Transport and Car Pooling**

Information request sheets will be used to enable staff to request personalised walking, cycling, public transport or car pooling information. Staff return their information request sheets to the GTPC and receive information related to their request.

### **1.16 Implementing the Green Travel Plan**

SRB will use the following measures to implement the Green Travel Plan:

#### **1.16.1 Staff awareness**

##### **1.16.1.1 Personnel Inductions**

During the Site Induction, new employees will be provided with information on how to access the site using sustainable transport.

##### **1.16.1.2 Public Transport Links and information**

SRB will place the following information in the public areas:

- Bus / train timetables.
- Information request forms detailing personalised public transport routes.

Staff are notified of the location of their nearest bus stop and bus times to and from work.

- Display maps detailing public transport to your organisation

##### **1.16.1.3 Facilities for Cyclists / walkers**

Dedicated lock-up facilities will be provided for staff that wish to walk or cycle to work. Male and female shower facilities will also be provided.

##### **1.16.1.4 Awareness of Fuel costs and emissions**

Personnel will be provided with information related to the average cost per km of car travel in terms of fuel and emissions to the environment.

##### **1.16.1.5 Events**

The Site will participate in relevant events such as:

- Bike Week / Walk to Work Day
- World Move for Health

##### **1.16.1.6 Poster Campaign/ noticeboards**

Information on travel options available to staff will be regularly emailed to staff, displayed on site noticeboards and canteens.

Factsheets will be disseminated to all personnel on the benefits of walking, cycling, public transport and carpooling.

## 1.9 Monitoring Travel Behaviour Change

In order to measure the impact of travel behaviour change strategies the following tools will be used:

- Before and After travel surveys.

The primary means of monitoring the impact of the Green Travel Plan initiatives will be through conducting Before and After Travel Surveys.

### *Before Travel Survey*

The Before Travel Survey is conducted prior to implementing any travel behaviour change initiatives.

This survey provides base line data against which to measure the impact of your initiatives.

### *After Travel Survey*

The After Travel Survey contains similar questions to the Before Travel Survey as well as specific

questions related to the activities and initiatives undertaken. The After Travel Survey is conducted after approx. 6 months of travel behaviour change initiatives. Comparing before and after survey results

will provide data on reductions in vehicle kilometres travelled (VKT) and which modes of sustainable transport have increased or decreased.

Ideally, the Before and After surveys should be matched to reflect accurate travel behaviour change.

However, due to attrition rates, the number of surveys completed may not match up.

- Travel Diaries.

Select a random sample of staff to complete a one week travel diary before, during and after implementing the Green Travel Plan

- Working Group

Establish a panel of staff to be interviewed over the lifetime of the Green Travel Plan. They should be interviewed before, during, and after the implementation of the Plan.

## 1.10 Ongoing Review

The Green Travel Plan is intended to be a living document and will be reviewed at six-monthly intervals to ensure it remains relevant to the Project Construction Stage. The GTPC will carry out the review.

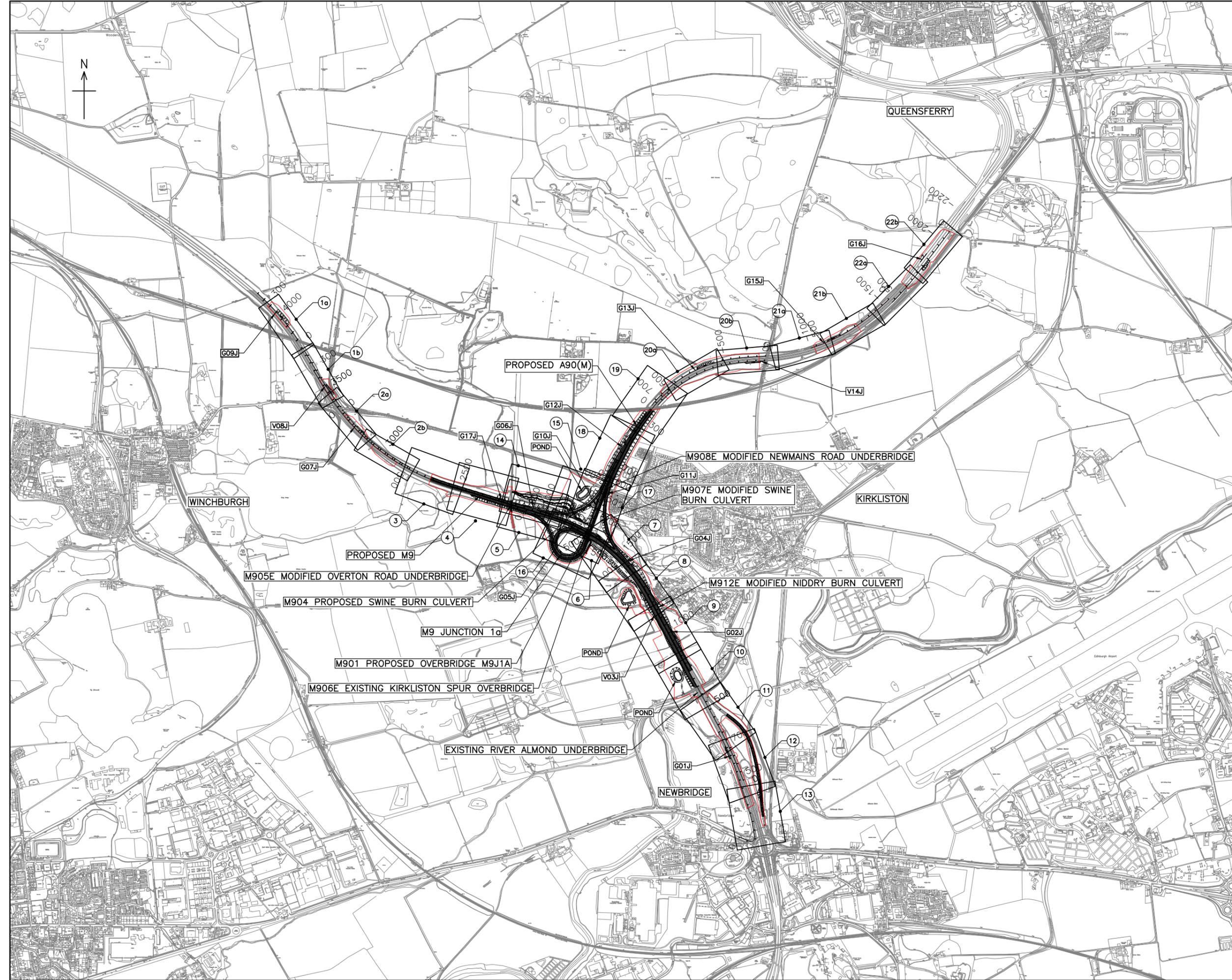
Staff feedback and the After Travel Survey results will be used to review the Travel Plan in May 2011. The review should include, but is not limited to:

- Effectiveness of the interventions and potential to continue their use
  - Additional interventions or activities
- Roles played by the Green Travel Plan Coordinator and Working Group
- Adequacy of organisational support provided for implementation

The Green Travel Questionnaire will be reported in the format included in **Appendix D**. this will allow comparison of the effectiveness of measures taken travel modes at the initial survey stages.

**APPENDIX A**  
**Scheme Layout Drawings**





**NOTES**  
 1. This drawing should be read in relation to subject of the Title. Other information shown on drawing is to be considered indicative only. Reference should be made to appropriate drawing series for other information.

**KEY**  
 1 Sheet Number  
 Lands Made Available

Rev.	SC	MSDW	MRD	26.07.11	PRELIMINARY
Drawn	MSDW	MRD			
Checked					
Approved					
Date					
Description					
Client					



Project  
**FORTH REPLACEMENT CROSSING M9 JUNCTION 1A**

Drawing Title  
**SCHEME LAYOUT PLAN**



Participant  
**Gifford WSP**

Independent Checker  
**WSP**

Scale (at A1) 1:10000 Date JUL.2011 Drawn SC

Reg. no. 17867/H/000/001 Rev. -

**APPENDIX B**  
**Letter of Agreement**



## **M9J1a Green Travel Plan**

### **Letter of Agreement**

SRB Civil Engineering Ltd. recognises that travel is associated with our construction activities and that our employees, sub-contractors and suppliers have a direct impact on the environment, particularly through vehicle emissions, fuel consumption and our impact on the local community through road congestion. Inefficient business travel also adds considerable costs to our business.

SRB Civil Engineering are committed to encouraging more sustainable modes of transport across the M9J1a Project through the following objectives:

- Reduce vehicle kilometres travelled (VKT) to and from the M9J1a Compound, particularly single occupancy vehicle trips
- Reduce VKT for work related trips
- Increase staff use of sustainable transport modes- walking, cycling, public transport, carpooling / lift sharing
- Ensuring that staff are informed on the opportunities and benefits of using sustainable transport
- Providing the necessary facilities to enable personnel to walk and cycle to work
- Promoting SRB Civil Engineering as an innovative and environmentally aware organisation.

We will measure and report our progress towards meeting these objectives through the life of the M9J1a Project.

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John Crowley Director  
SRB Civil Engineering Ltd.

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John Duggan Director  
SRB Civil Engineering Ltd.

**APPENDIX C**  
**Before Travel Questionnaire**

## M9J1a Project - 14<sup>th</sup> December 2011

# Questionnaire on Personnel Travel Arrangements

### Instructions

Please tick the most relevant box

1) \_\_\_\_\_ **How do you currently travel to work**

- a. Car
- b. Bus
- c. Cycle
- d. Walk
- e. Other - Please state:

2) \_\_\_\_\_ **If a) above , how many people are in the car (including the driver)**

- a. One
- b. two
- c. More than two

3) \_\_\_\_\_ **How far do you come to work**

- a. Less than one mile
- b. One to three miles
- c. Three to five miles
- d. More than Five miles
- e. State Location (optional):

4) \_\_\_\_\_ **Would you be interested in sharing a lift with one of your workmates**

- a. Yes
- b. No

**Please turn over page**

5) \_\_\_\_\_ **Would you be interested in cycling or walking to work**

- a. Yes (cycling)
- b. Yes (Walking)
- c. Not really practical for me

6) \_\_\_\_\_ **How long does it typically take you to come to work**

- a.

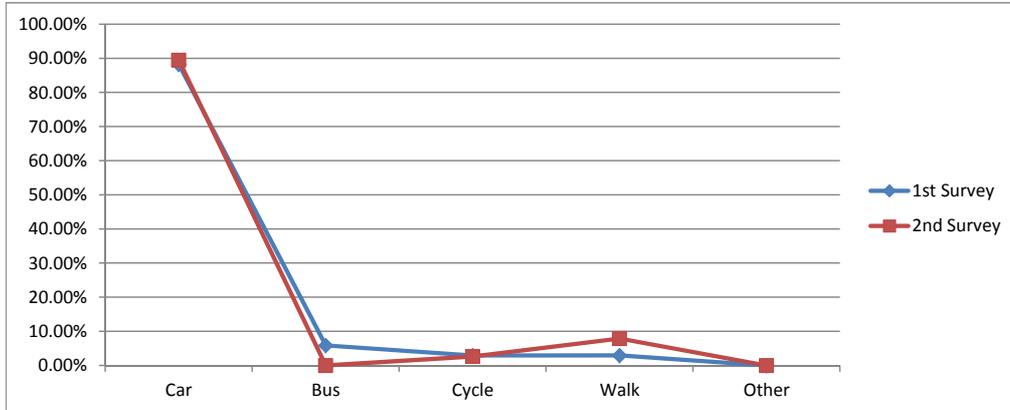
7) **Have you any suggestions that would make travelling to work easier / more environmentally friendly**

**Thanks**

**APPENDIX D**  
**Typical Reporting Format**

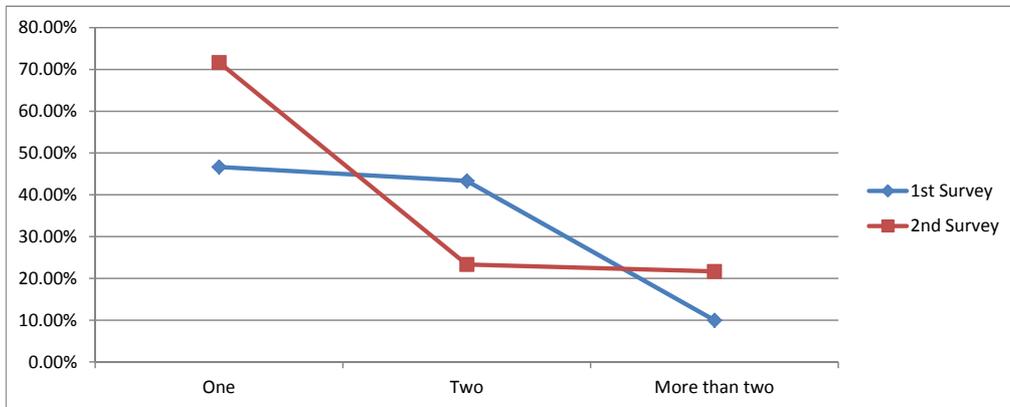
**1. How do you currently travel to work?**

	1st Survey	%	2nd Survey	%
a. Car	30	88.24%	68	89.47%
b. Bus	2	5.88%	0	0.00%
c. Cycle	1	2.94%	2	2.63%
d. Walk	1	2.94%	6	7.89%
e. Other	0	0.00%	0	0.00%
	<b>34</b>		<b>76</b>	



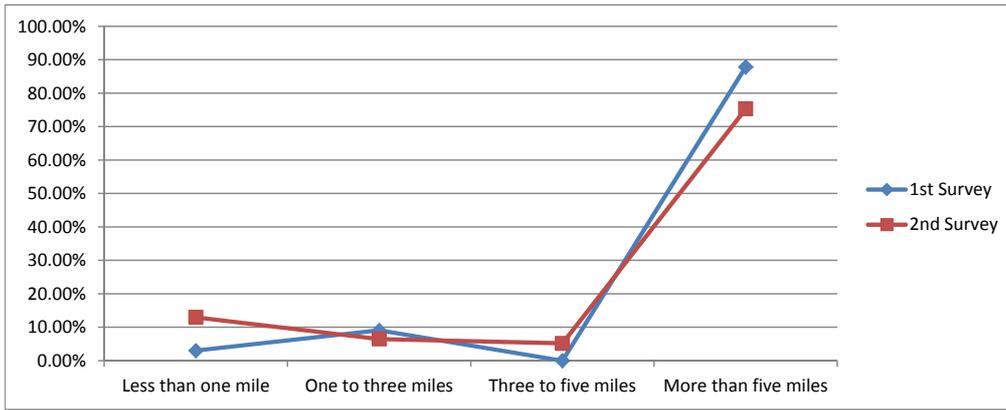
**2. If a) above, how many people are in the car (including the driver)?**

	1st Survey	%	2nd Survey	%
a. One	14	46.67%	43	71.67%
b. Two	13	43.33%	14	23.33%
c. More than two	3	10.00%	13	21.67%
	<b>30</b>		<b>60</b>	



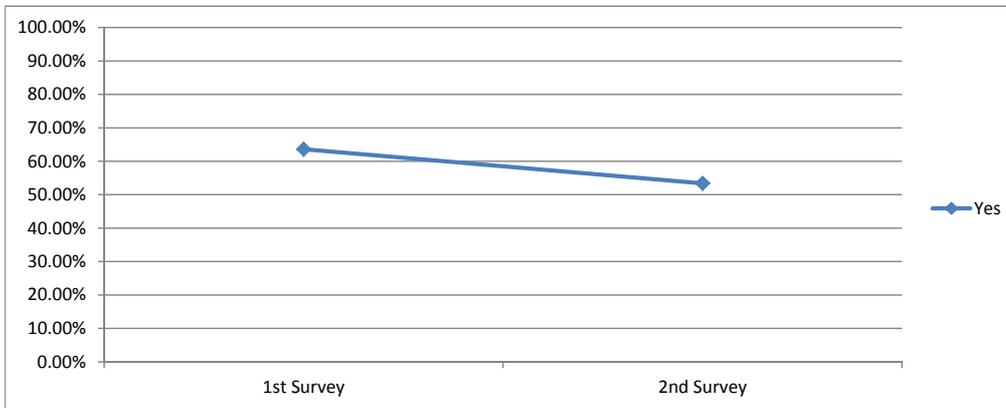
**3. How far do you come to work?**

	1st Survey	%	2nd Survey	%
a. Less than one mile	1	3.03%	10	12.99%
b. One to three miles	3	9.09%	5	6.49%
c. Three to five miles	0	0.00%	4	5.19%
d. More than five miles	29	87.88%	58	75.32%
	<b>33</b>		<b>77</b>	



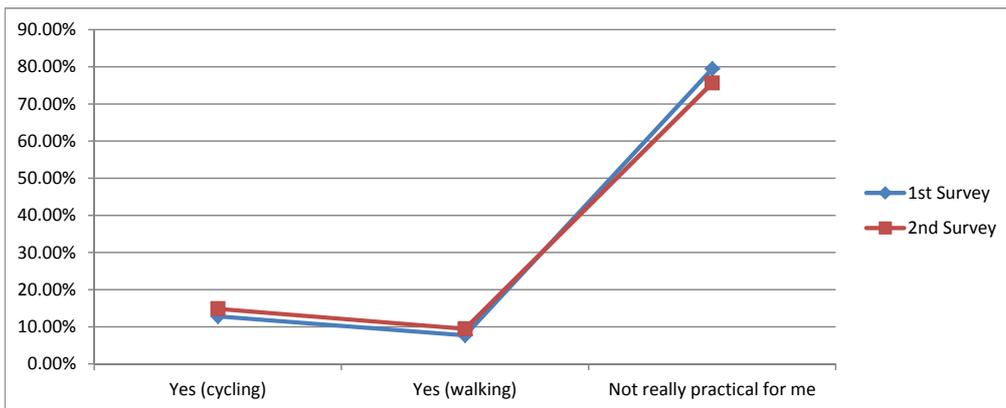
**4. Would you be interested in sharing a lift with one of your workmates?**

	1st Survey	%	2nd Survey	%
a. Yes	21	63.64%	39	53.42%
b. No	12	36.36%	34	46.58%
	<b>33</b>		<b>73</b>	



**5. Would you be interested in cycling or walking to work?**

	1st Survey	%	2nd Survey	%
a. Yes (cycling)	5	12.82%	11	14.86%
b. Yes (walking)	3	7.69%	7	9.46%
c. Not really practical for me	31	79.49%	56	75.68%
	<b>39</b>		<b>74</b>	



6. How long does it typically take you to come to work?

	25, 75, 60, 60, 5, 30, 30, 30, 20, 10, 30, 60, 50, 90, 40, 45, 25, 90, 55, 40, 17, 35, 20, 35, 60, 35, 50, 55, 90, 50, 40, 25, 30, 20, 30, 10, 60, 60, 2, 60, 45, 10, 70, 10, 3, 45, 45, 50, 35, 20, 2, 40, 40, 35, 1, 15, 5, 5, 45, 90, 25, 50, 75, 45, 90, 45, 60, 90, 70, 40, 12, 40, 105, 40, 60, 25, 60, 15, 35, 35, 90, 10, 60, 5, 10, 20, 60, 10, 15, 15, 60, 10, 40, 3, 12, 20, 30, 20, 60, 30, 15, 3, 55, 3, 20, 60, 40
<b>44.59mins</b>	<b>35mins</b>

	1st Survey	%	2nd Survey	%
0-15 mins	8	25.00%	18	24.00%
16-30 mins	3	9.38%	19	25.33%
31-45 mins	8	25.00%	16	21.33%
46-60 mins	6	18.75%	17	22.67%
61-75 mins	2	6.25%	2	2.67%
76-90 mins	4	12.50%	3	4.00%
Over 90 mins	1	3.13%	0	0.00%
	32		75	

