

Title: Amey Forth Road Bridge High Wind Management Plan

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Amey

## Forth Road Bridge High Wind Management Plan

Project:

**Forth Bridge Scottish Trunk Road Unit**

Project No:

### Purpose:

This High Wind Management Plan identifies the practices, resources, activities, controls and procedures to be used on the Project for High Wind Management established by the Amey Quality Management System, to which reference must be made.

Original Issue ..... Date: .....

Approved: Operations Manager

Original Issue ..... Date: .....

Authorised: Operating Company Representative

Title: Amey Forth Road Bridge High Wind Management Plan

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Contract Specific

**RECORD OF AMENDMENTS**

REV No.	DATE	REF. No.	TOPIC	APPROVED Management Systems	ADOPTED Project Manager
01	Mar 15		First Draft		
02					
03					
04					
05					
06					

Title: Amey Forth Road Bridge High Wind Management Plan

Mandatory

Generic

Guidance

Contract Specific

## 1. Introduction

Transport Scotland is an agency of the Scottish Government and is accountable to Parliament and the public through Scottish Ministers.

The Trunk Road and Bus Operations Directorate is responsible for the management and maintenance of the trunk road network in Scotland and co-ordination of response to emergencies affecting users of the network. Transport Scotland and its Chief Executive are directly accountable to the Transport Minister.

The incidence of high winds affecting the Forth Road Bridge is a recurring event which can have a considerable effect on trunk road users and the local and wider community. The Forth Road Bridge is an exposed structure and it is essential that traffic control is applied during high winds to ensure that vulnerable vehicles are not exposed and blown over or blown into the path of other vehicles.

Transport Scotland works in partnership with many other stakeholders involved in the provision of transport related services including public and private sector transport operators, the road haulage industry, local authorities and government including the emergency services. It also works closely with seven regional transport partnerships (RTPs) who take a strategic view of the transport needs of people and businesses in their region.

The requirement to develop a responsible, safe, effective and efficient management system for road user traffic during severe weather events and high winds on the A90 Forth Road Bridge is therefore important to all stakeholders.

The purpose of the procedures contained in this plan is to ensure that the management of high wind severe weather events achieves the safety of all classes of road user whilst maximising the use of all available sections of the trunk road network to ensure disruption is minimised. Central to this is the communications strategy between the various stakeholders.

This plan identifies the specific wind monitoring and operational procedures to be adopted in response to predicted and actual high winds in the proximity of the Forth Road Bridge.

## 2. Consultation

The list of stakeholders is too numerous to tabulate within this document. There is however a recognition that the main stakeholders include, Traffic Scotland, Amey, Transport Scotland, Fife, Edinburgh and West Lothian Councils, Police Scotland, Scottish Ambulance Service and Scottish Fire and Rescue Service, bus operators and the Road Haulage Association and Freight Transport Association.

The road user is also a key stakeholder. Road users are wide ranging and numerous which makes them difficult to consult with effectively. The road user can, however, be advised via an effective media management strategy and information disseminated principally through Traffic Scotland.

Title: Amey Forth Road Bridge High Wind Management Plan

<b>Mandatory</b>
Generic
Guidance
Contract Specific

### 3. System Architecture

#### 3.1 Findlay Irvine Windalert

Amey, in partnership with Findlay Irvine provides a wind monitoring facility at the Forth Road Bridge.

A weather station is sited at mid-span of the Forth Road Bridge. Monitoring of Wind Speed is carried out using the Findlay Irvine Windalert System which utilises the real time analysis of directional wind speed. The maximum speed is calculated during each ten minute period and an alarm is automatically generated should a threshold limit be exceeded. The intervention matrix developed by the Forth Estuary Transport Authority (FETA) via its operational experience is detailed in Section 4 below.

In development with Amey, Findlay Irvine has enabled the Windalert user interface to be provided as a web based browser allowing access from any location and allowing various levels of user to be established to enable changes to be made to the system.

A 24 hour help desk is provided by Findlay Irvine providing full Technical Support and Guidance. Front line maintenance is provided by Amey.

#### 3.2 Meteorological Advice

A specialist forecasting service is provided by the Met Office, similar to Erskine Bridge, which provides advance notification of expected wind events as set out in 3.3. This is delivered as an email alert to Amey's Incident Response Personnel and is backed up by a call to the Duty Manager from the forecaster. The Met Office forecaster can be contacted at any time to provide additional specialist forecasting information.

#### 3.3 Wind Forecast

The Forth Road Bridge will be the subject of site-specific wind forecast/wind warning information provided by the Met Office, as follows:

##### (a) Daily Forecast

This forecast is issued at approximately 13.30 hrs each day and permits the Operating Company (OC) to plan and prepare for possible restrictions or closures. It is graduated and reflects rising wind speeds:

- |   |                |
|---|----------------|
| • <b>N/A</b> : maximum gust speeds 35 mph and below;              | <b>Level 0</b> |
| • <b>Green (G)</b> : maximum gust speeds 36 to 45 mph; -          | <b>Level 1</b> |
| • <b>Yellow (Y)</b> : maximum gust speeds 46 to 50 mph; -         | <b>Level 2</b> |
| • <b>Amber (A)</b> : maximum gust speeds 51 to 65 mph; -          | <b>Level 3</b> |
| • <b>Purple (P)</b> : maximum gust speeds 66 mph to 80 mph; and - | <b>Level 4</b> |
| • <b>Red (R)</b> : maximum gust speeds over 80 mph. -             | <b>Level 5</b> |

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Guidance
Contract Specific

### (b) Detailed Daily 24-hour Forecast

This forecast is also issued at approximately 13.30 hrs daily and runs from 1800 hrs that evening to 1700 hrs the following day.

### (c) Wind Warnings

'Strong Wind Warning' issued, if during the next 6 hours the maximum gust is forecast to exceed 35 mph.

'Wind (Gale) Warning' issued if during the next six hours the maximum gust is forecast to exceed 45 mph.

'Wind (Storm) Warning' is issued if during the next six hours the maximum gust is forecast to exceed 65 mph.

## 3.4 High Winds

Taking cognisance of wind forecasting and warning information from the Met Office and monitoring 'live' speeds provided by the wind data facility on the Forth Road Bridge, graduated operational responses will be implemented to allow the majority of drivers continued use of the Bridge, until the level 5 is reached. These are as follows:

- Level 1** A 'Warning' phase implemented for maximum wind gusts in the 35 to 45 mph range, and impose speed limit of 40 mph;
- Level 2** Procedures implemented to advise of 'segregation' arrangements during 45 to 50 mph wind gusts, in order to divert double-decked buses;
- Level 3** Maximum winds gusts exceeding 50 mph. Close bridge to high-sided vehicles, caravans, trailers, motorcyclists, pedestrians and cyclists;
- Level 4** Maximum wind gust speeds exceeding 65 mph. Close bridge to all vehicles except cars and implement speed limit of 30 mph; and
- Level 5** Full closure of Forth Road Bridge for wind gusts of 80 mph and above, irrespective of wind direction.

Note: Wind direction is not taken into account.

## 3.5 CCTV

There are 5 monitoring CCTVs (see Schedule 3 Part 7 Annex 3.7/H) available to monitor traffic conditions on the A90 Forth Road Bridge.



### 3.6 Information Dissemination

Traffic Scotland provides information to the media and other Value Added Service Providers (VASPS). These include organisations such as the BBC who can instantly deliver this information to the road user over a wide area. It is important therefore that any data provided by Amey's ILO is accurate and up to date.

### 4. Intervention Matrix

The Forth Estuary Transport Authority has developed an intervention matrix as per 3.4 above based on operational experience over a period of time. This matrix has ensured that measures taken during high wind events have minimised the impact on all categories of road user with the exception of incidents caused by drivers of vehicles who have not heeded warning signs.

The matrix has five intervention levels:

- Level 1** – Wind speed is greater than 35mph but less than or equal to 45mph with a rising pattern. At this level road users are alerted to increased wind speeds. A speed restriction of 40 mph is implemented;
- Level 2** – Wind speed is greater than 45mph but less than or equal to 50 mph with a rising pattern. At this level bus companies are contacted and the Forth Road Bridge is closed to double-decked buses;
- Level 3** – Wind Speed is greater than 50mph but less than or equal to 65 mph with a rising pattern. At this level road users are advised that the Forth Road Bridge is closed to high sided vehicles, caravans, trailers, motorcycles, pedestrians and cyclists;
- Level 4** - Wind Speed is greater than 65mph but less than or equal to 80 mph with a rising pattern. At this level road users are advised that Forth Road Bridge is closed to all vehicles except cars. A speed restriction of 30 mph is implemented; and
- Level 5** – Wind Speed is greater than 80mph with a rising pattern. At this level road users are advised that Forth Road Bridge is closed to all vehicles.

### 5. Operation and Implementation

#### 5.1 Operational Plan

This operational plan recognises that no single agency or organisation can operate in isolation when responding to incidents and events on the trunk road network.

The plan has been developed and will be regularly monitored in conjunction with Transport Scotland, Traffic Scotland and Police Scotland. The publishing of the plan will provide a clear indication of roles and responsibilities both individually and collectively.

Title: Amey Forth Road Bridge High Wind Management Plan

<b>Mandatory</b>
Generic
Guidance
Contract Specific

The operational implementation of the plan and the associated decision making process fully supports Police Scotland in coordinating and managing all major incidents.

## 5.2 Responsibilities

### (a) Police Scotland

The Police are empowered in terms of the Road Traffic Regulation Act 1984, Section 67(1) to close or instruct closure of a road in extraordinary circumstances, in order to mitigate potential danger. Consequently, in situations which raise concerns for safety, and with increasing wind velocities at the Forth Road Bridge being within the recognised parameters, the Duty Engineer's findings must immediately be intimated to Police Scotland for the police to decide and confirm approval for the implementation of 'segregation' or 'full closure' arrangements.

### (b) Duty Manager (24/7)

The OC Duty Manager (DM) will ensure that all wind related information for the Forth Road Bridge is appropriately monitored and evaluated and, where appropriate, will instruct OCR staff to consult with the Police, with a view to implementing procedures for **Levels 2** – 'Closed to Double-decked buses' up to **Level 5** – 'Full Closure'. The DM will be responsible for liaising with the Met Office to confirm forecasts and projections.

### (c) The Operational Control Room (OCR)

The OCR will undertake continuous monitoring of wind data from the 'live' information feed on the web site, fully supporting the DM in the wind management arrangements for the Forth Road Bridge and liaising with Police Scotland. They will coordinate with Traffic Scotland on the implementation of each of the relevant stages.

### (d) Duty Officer

In close liaison with the OCR, the Amey Duty Officer (DO) will be responsible for deploying all traffic management (TM) resources necessary to fulfil requirements to assist police in implementing the agreed Level's response and updating staff with the relevant progress of TM operations.

### (e) Traffic Scotland

Traffic Scotland will maintain close liaison with the OCR throughout a high wind incident and will;

- Implement the pre-arranged variable message signs (VMS) Plan to reflect the parameters of the particular Level notified;

Title: Amey Forth Road Bridge High Wind Management Plan

Mandatory
Generic
Guidance
Contract Specific

- Undertake a cursory CCTV sweep of the visible bridge deck area for a 'Full Closure', in order to confirm the absence of vehicles to the OCR, after all TM operations have been completed;
- Updating information on both Traffic Scotland and Freight Scotland web sites; and
- At the completion of the incident, cancel associated VMS Plans and following a full closure **only** when a complete removal of all physical traffic management has been effected and when notified by the OCR.

### 5.3 Operational Response

The operational response is as follows.

#### 5.3.1 Met Office issues wind warnings-site specific to Forth Road Bridge

- Incident Liaison Officers, Duty Supervisors and Duty Managers will be at a state of heightened awareness. Other agencies should be aware of the developing situation.

#### 5.3.2 Winds speeds below Level 1 threshold

- Below Level 1 no operational response is required.

#### 5.3.3 Winds speeds reach Level 1 threshold

- Information provided to Amey by Findlay Irvine. Amey inform Traffic Scotland, Police Scotland and Edinburgh and Fife Councils and other agencies.
- Traffic Scotland will activate pre-planned Variable Message Signing strategy and advise VASPS.
- Display 'Strong Wind' and 40 mph speed limit on bridge NEI signs.
- The Duty Manager and Incident Liaison Officers will monitor wind speeds. If levels drop then Traffic Scotland will remove all strategic signs.

#### 5.3.4 Winds speeds reach level 2 threshold

- Information provided to Amey by Findlay Irvine. Amey's Duty Manager telephones Police Scotland Duty Officer. Amey inform Traffic Scotland and Edinburgh and Fife Councils and other agencies.
- Traffic Scotland will activate pre-planned Variable Message Signing strategy and advise VASPS.
- Bus companies are contacted and the Forth Road Bridge is closed to double-decked buses.



Title: Amey Forth Road Bridge High Wind Management Plan

Mandatory
Generic
Guidance
Contract Specific

### 5.3.5 Winds speeds reach level 3 threshold

- Findlay Irvine informs Amey. Amey's Duty Manager telephones Police Scotland Duty Officer. Amey informs Traffic Scotland and Edinburgh and Fife Councils and other agencies
- Traffic Scotland will activate pre-planned Variable Message Signing strategy and advise VASPS.
- Road users advised the Forth Road Bridge is closed to high sided vehicles, caravans, trailers, motorcycles, pedestrians and cyclists.
- Contact Police Scotland, Ambulance Control and DFDS Seaways.

### 5.3.6 Winds speeds reach level 4 threshold

- Findlay Irvine informs Amey who informs other agencies as above. Amey's Duty Manager telephones Police Scotland Duty Officer.
- Traffic Scotland will activate pre-planned Variable Message Signing strategy and advise VASPS.
- Close bridge to all vehicles except cars.
- Change bridge NEI signs to 30 mph.
- Contact Police Scotland, Ambulance Control and DFDS Seaways.

### 5.3.5 Wind speeds reach level 5 threshold

- Findlay Irvine informs Amey who informs other agencies as above. Amey's Duty Manager telephones Police Scotland Duty Officer.
- Traffic Scotland will activate pre-planned Variable Message Signing strategy and advise VASPS.
- Close bridge to all traffic.
  - South Closure Point – Echline Roundabout – Closure is provided by Police Scotland and traffic management is provided by Amey. Traffic management set up just north of northbound off-slip with Police presence and at entry to northbound on-slip. Drop-down 'Bridge Closed' signs displayed on B800 and A907. Refer to Amey Forth Bridges' Unit Serv-Operations-PR-02 – Diverting Procedure for step by step actions.

- North Closure Point – Admiralty and Ferrytoll Roundabout/Welldean – Closure is provided by Police Scotland and traffic management is provided by Amey. Traffic management set up just south of southbound off-slip at Admiralty with Police presence and at entry to southbound on-slips from Ferry Toll and Admiralty Roundabout. Refer to Amey Forth Bridges' Unit Serv-Operations-PR-02 – Diverting procedure for step by step actions.
- Initial closure will be by means of temporary traffic management measures and the presence of Police Scotland uniformed officers and vehicles. Police Scotland will make other emergency services aware of the closure and the reason for the closure.
- Amey Duty Officer will mobilise resources to closure points.
- In the case of an emergency response by emergency services they may cross the Forth Road Bridge having undertaken their own risk assessments and consulted with Police Scotland and Amey.

### 5.3.6 Wind speeds drop below level 5 threshold

- Findlay Irvine informs Amey who informs other agencies when wind speed drops.
- Amey Duty Manager will contact Police Scotland and jointly decide re-opening but only after a post-incident inspection in accordance with *Post Incident Special Inspection Procedure for Severe Weather Event, FBUNIT-SERV-OPERATIONS-PR-41*. This decision will take account of on-site reports including any drive through by Amey and Police Scotland, Findlay Irvine information, Met Office forecasts and local knowledge.
- If the decision to re-open is taken then all will be informed by their respective organisations of the decision.
- Traffic Scotland will activate pre-planned Variable Message Signing strategy and advise VASPS.
- The removal of the closure rests with Amey. Police Scotland will oversee the reopening of the Forth Road Bridge and monitor driver behaviour when traffic uses the bridge again.

### 5.3.7 Continued monitoring

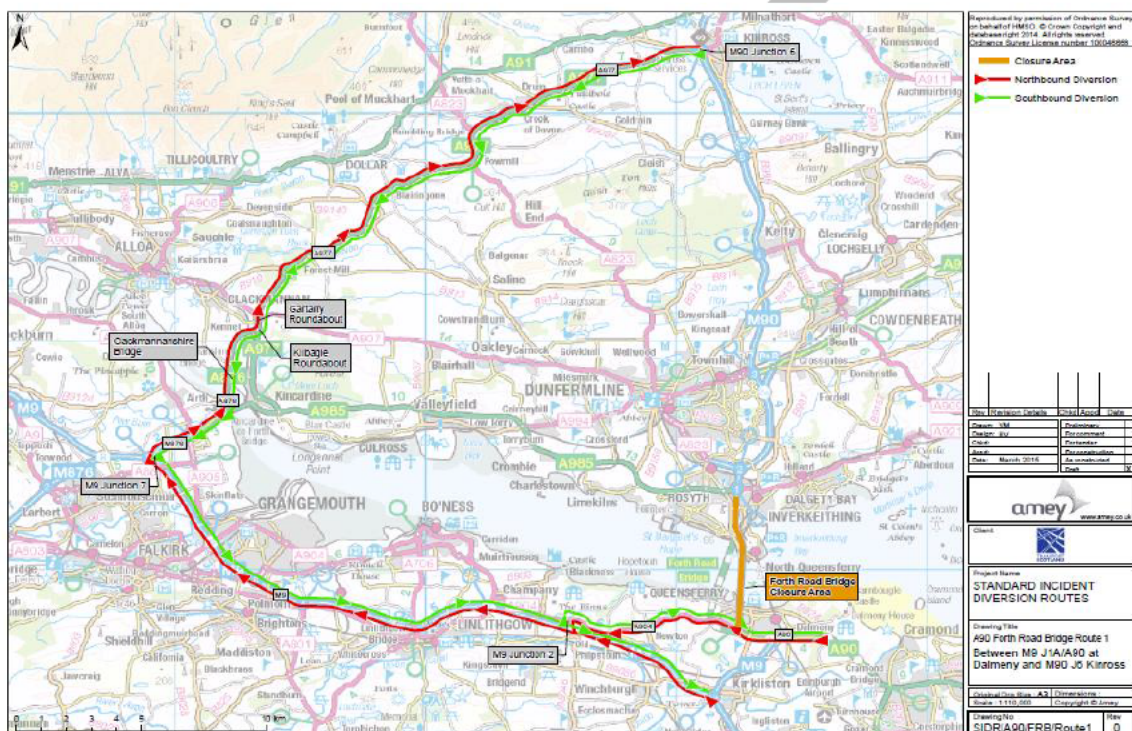
- Wind speeds will be monitored as per the matrix.

### 5.3.8 Review

- Following each closure the Network Manager/Journey Time Reliability Co-ordinator will instigate a de-brief session with operational partners. Any observations that could improve service/response will be noted and implemented if appropriate.

### 6. Alternative Routes for Traffic

The Emergency Standard Diversion Routes A985/A876/M876/M9 and A977/A876/M876/M9 that are to be used are as shown below.



Emergency Standard Diversion Route 1 Forth Road Bridge HSV Restrictions or Closed



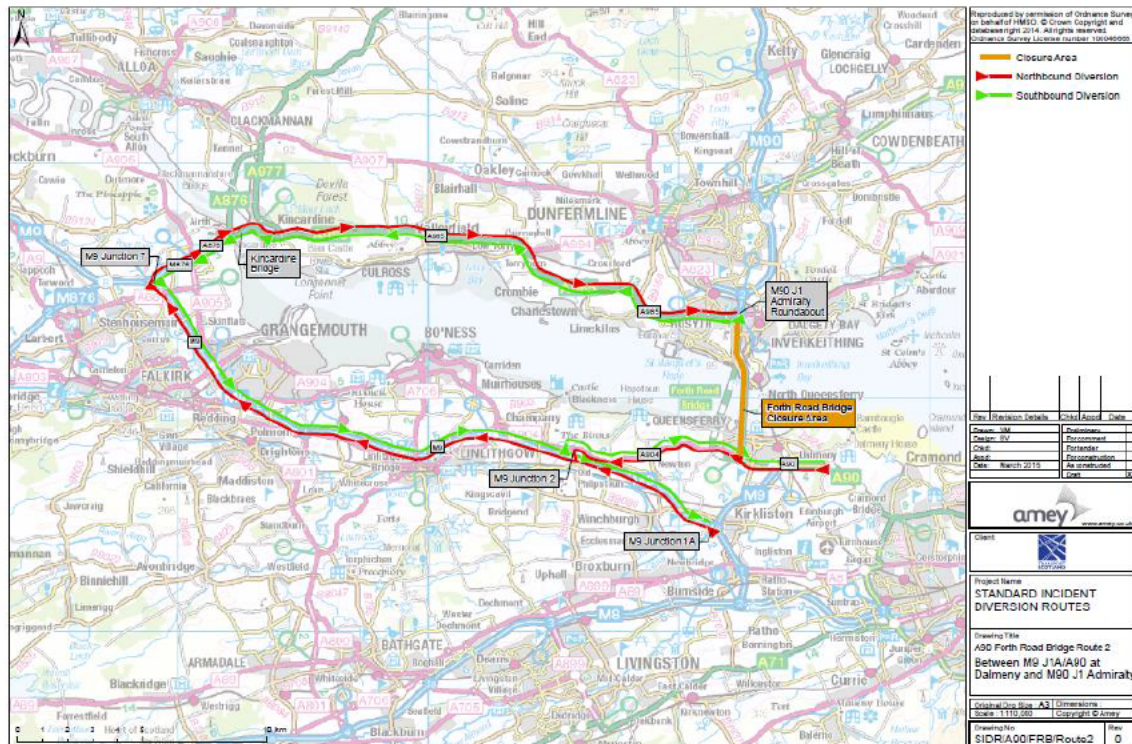
## Title: Amey Forth Road Bridge High Wind Management Plan

Mandatory

Generic

Guidance

Contract Specific



## Emergency Standard Diversion Route 2 Forth Road Bridge HSV Restrictions or Closed

## Diversions:

(i) *Forth Road Bridge Restrictions:* Closure between Echline Roundabout and Ferrytoll Roundabout. Traffic Scotland Links – XXXXX **TO BE CHECKED BY NETWORK TEAM**

## Northbound

Traffic from Edinburgh on A90 or the M9 from Junction 1A take the northbound off-slip to Echline Roundabout and first left at Echline Roundabout onto the A904 westbound. Take a left at the B8046 junction then second right onto the westbound M9 on-slip at Junction 2. Follow the M9 until Junction 7 onto the M876 northbound, then the A876 to Higgin's Neuk Roundabout turning second left onto the A985 Kincardine Bridge then left onto the A985 eastbound to Admiralty Junction, Junction 1 on the M90. Northbound traffic from the M9, Junction 1 Newbridge will follow the same route from Junction 1A, on the M9. Distance: 33.4 miles.

## Southbound

- (i) Take the southbound off-slip at Junction 1 M90 and take the fourth left onto the A985 westbound at Admiralty Roundabout. Continue on the A985 and cross the Kincardine Bridge south westerly to the A876 and then south onto the M876 to Junction 7 on the M9 and take the eastbound on-slip on to the eastbound M9 to Junction 1A on the M9. Distance: 33.4 miles.



Title: Amey Forth Road Bridge High Wind Management Plan

**Mandatory**

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Guidance

Contract Specific

- (ii) Take the southbound off-slip on the M90 at Junction 6 and the fourth left hand turn from the Kinross Roundabout onto the A977 westbound. Stay on the A977 to the Glentarry Roundabout and continue on the A977 through the roundabout to the Kilbagie Roundabout. Take the second left hand turn onto the A876 and onto the Clackmannanshire Bridge. Take the second left at Higgins' Neuk Roundabout and continue south onto the A876 and then the M876. Take the eastbound on-slip at Junction 7, M9 and head east on the M9 to Junction 1A and Newbridge at Junction 1 Distance: 37.0 miles.

Permanent Trailblazer symbols indicate the diversion route affixed to current advance direction signs. **REQUIRES CHECKED BY NETWORK TEAM**

## 7. Intervention Thresholds

The thresholds within the intervention matrix are those which have been developed by the Forth Estuary Transport Authority through operational experience and liaison with stakeholders and are set out in Section 4.

- (i) The above restrictions apply regardless of direction.
- (ii) With regard to bridge closure, Police Scotland shall be advised of the likelihood of closure as early as practical based on weather forecasts.
- (iii) At all stages record all timings of restrictions, Traffic Scotland signs, faxes and phone calls in the Daily Log Book.
- (iv) Any amendments must be reflected on the website
- (v) **Up until the opening of the Queensferry Crossing the following contacts at the Forth Replacement Crossing shall be informed of any restrictions required due to intervention thresholds being reached:**

\_\_\_\_\_ ;  
 \_\_\_\_\_  
 \_\_\_\_\_ ;  
 \_\_\_\_\_

Level	Wind Speed	VMS Status	Organisation	Action
0	< 35 mph	Nil	Amey	Real time wind speed data monitored via Windalert on Findlay Irvine PC.

1	>35 mph ≤ 45 mph with a rising pattern	CAUTION HIGH WINDS/ STRONG WINDS	Findlay Irvine	Advise Amey and continue to monitor real -time wind speed.
			Amey	Set NEI warning signs to ' <b>STRONG WINDS</b> ' and '40mph' speed restriction. Refer to Forth Bridges' Unit-Serv-Operations-PR35. Change message on Information Line answer machine. Advise reception staff. Advise all Amey personnel and Contractors staff working on bridge. All temporary works and bridge gantries to be secured fully. Accept new alarm level of 45 mph on Findlay Irvine PC.
			Traffic Scotland	Populate the Traffic Scotland website and push incident related data to VASPS and other media. When Signing priorities allow set strategic Variable Message Signs to ' <b>CAUTION HIGH WINDS</b> '.

< 35 mph for a continuous period of 10 min.			Findlay Irvine	Advise Amey and continue to monitor real -time wind speed.
			Amey	Advise Traffic Scotland. Remove NEI warning signs ' <b>STRONG WINDS</b> ' and '40mph' speed restriction. Change message on Information Line answer machine. Update FRB website. Advise reception staff. Advise all Amey personnel and Contractors staff working on bridge. Inspection of temporary work and bridge gantries to be undertaken. Issue Group Email – QD 006-8
			Traffic Scotland	Remove ' <b>CAUTION HIGH WINDS</b> ' from VMSs and remove VMS speed restriction.

2	> 45 mph ≤ 50 mph with a rising pattern	FORTH ROAD BRIDGE CLOSED TO DOUBLE-DECKED BUSES	Findlay Irvine	Advise Amey and continues to monitor real -time wind speed.
			Amey	Phone Police Scotland. Advise Traffic Scotland, Edinburgh and Fife Councils by e-mail. Contact local bus companies (Stagecoach, First and Scottish Citylink) phone and email (QD 006-1) and inform that bridge closed to double-decked buses. Change message on Information Line answer machine. Update FRB website. Select plan control for Bridge closed to Double-Decked buses on MS301/302.
			Traffic Scotland	Populates the Traffic Scotland website and pushes incident related data to VASPS and other media. Sets strategic VMSs to ' <b>CAUTION HIGH WINDS</b> '. Where monitoring CCTVs are available Traffic Scotland will remotely monitor strategic traffic flow in the vicinity of the high wind incident. Where CCTVs are unavailable they will rely on reports from the Police or ISUs.

			Findlay Irvine	Advise Amey and continues to monitor real -time wind speed.
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	< 45 mph for a continuous period of 20 min.	<b>CAUTION HIGH WINDS</b>	Amey	Phone Police Scotland. Advise Traffic Scotland, Edinburgh and Fife Councils by e-mail. Contact local bus companies (Stagecoach, First and Scottish Citylink) and inform that bridge opened to double-decked buses. Change message on Information Line answer machine. Update FRB website. Accept new alarm level of 45 mph on Findlay Irvine PC. Advise Amey reception staff.
			Traffic Scotland	Retains strategic variable message signs to 'CAUTION HIGH WINDS'.
				Populates the Traffic Scotland website and pushes incident related data to VASPS and other media.

3	> 50 mph ≤ 65 mph with a rising pattern	<b>FORTH ROAD BRIDGE CLOSED TO HIGH SIDED VEHICLES</b>	Findlay Irvine	Advise Amey and continue to monitor real -time wind speed.
			Amey	Phone Police Scotland. Advise Traffic Scotland, Edinburgh and Fife Councils by e-mail. Advise Ambulance Control. Issue Group Email - QD 006-2. Advise all Amey personnel and Contractors working on the bridge.
				Close bridge to high-sided vehicles; caravans; trailers; motorcycles. Close bridge foot/cyclepaths to cyclists and pedestrians. Inform all Amey personnel and contractors of situation and that they still have access to footpaths if required. Switch on slip road traffic lights. Request appropriate strategic signage from Traffic Scotland, request an RRN number and record in Daily Log Book. Change message on Information line answer machine. Update FRB Website. Advise staff in main reception. Advise Ambulance Control. Accept new alarm level of 65mph on Findlay Irvine PC.
			Traffic Scotland	Populates the Traffic Scotland website and pushes incident related data to VASPS and other media.
				Sets strategic VMSs to 'FORTH ROAD BRIDGE CLOSED TO HIGH SIDED VEHICLES'.
				Where monitoring CCTVs are available Traffic Scotland will remotely monitor strategic traffic flow in the vicinity of the high wind incident. Where CCTVs are unavailable they will rely on reports from the Police, ISUs or Councils of congestion problems.

	< 50 mph for a continuous period of 20 min.	<b>CAUTION HIGH WINDS</b>	Findlay Irvine	Advise Amey and continues to monitor real -time wind speed.
			Amey	Advise Traffic Scotland, Police Scotland and Edinburgh and Fife Councils by e-mail. Issue Group Email – QD 006-7
				Confirm reopening of bridge by telephone call to Traffic Scotland.
			Police	Implements procedure to open bridge in conjunction with

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			Scotland	Amey.
			Traffic Scotland	Remove ' <b>FORTH ROAD CLOSED TO HIGH SIDED VEHICLES</b> ' from strategic VMSs and replace with ' <b>CAUTION HIGH WINDS</b> '..
				Populates the Traffic Scotland website and pushes incident related data to VASPS and other media.
				Where monitoring CCTVs are available Traffic Scotland will remotely monitor strategic traffic flow in the vicinity of the high wind incident. Where CCTVs are unavailable they will rely on reports from the Police, ISUs or Councils of congestion problems.

4	> 65 mph ≤ 80 mph with a rising pattern	FORTH ROAD BRIDGE CLOSED CARS ONLY	Findlay Irvine	Advises Amey and continues to monitor real -time wind speed.
			Amey	Phone Police Scotland. Advises Traffic Scotland, Edinburgh and Fife Councils by e-mail. Advise all Amey personnel and Contractors working on the bridge to leave with immediate effect. Advise Ambulance Control. Close bridge to all vehicles except cars. Change bridge NEI signs to "30mph". Request appropriate strategic signage from Traffic Scotland, request an RRN number and record in Daily Log Book. Change message on Information line answer machine. Update FRB Website. Advise staff in main reception. Issue Group Email - QD 006-3. Accept new alarm level of 80mph on Findlay Irvine PC.
			Traffic Scotland	Populates the Traffic Scotland website and pushes incident related data to VASPS and other media.
				Sets strategic VMSs to ' <b>FORTH ROAD BRIDGE CLOSED CARS ONLY</b> '.
				Where monitoring CCTVs are available Traffic Scotland will remotely monitor strategic traffic flow in the vicinity of the high wind incident. Where CCTVs are unavailable they will rely on reports from the Police, ISUs or Councils of congestion problems.

	< 65 mph for a continuous period of 30 min.	FORTH ROAD BRIDGE CLOSED TO HIGH SIDED VEHICLES	Findlay Irvine	Advises Amey and continues to monitor real -time wind speed.
			Amey	Phone Police Scotland. Advise Traffic Scotland and Edinburgh and Fife Councils by e-mail. Advise Ambulance Control. Issue Group Email - QD 006-6. Open bridge to all vehicles except high-sided vehicles; caravans; trailers; motorcycles. Change bridge MS/ L signs to plan control Strong winds "40mph". Accept new alarm level of 50mph on Findlay Irvine PC. Request appropriate signage from Traffic Scotland, request an RRN number and record in Daily Log Book. Change message on Information line answer machine. Update FRB Website. Advise staff in main



Title: Amey Forth Road Bridge High Wind Management Plan

Mandatory
Generic
Guidance
Contract Specific

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				reception. Inform Amey personnel.
			Traffic Scotland	Sets strategic VMSs to ' <b>FORTH ROAD BRIDGE BRIDGE CLOSED TO HIGH SIDED VEHICLES</b> ' VMS speed restriction remains at 30mph.
				Populates the Traffic Scotland website and pushes incident related data to VASPS and other media.
				Where monitoring CCTVs are available Traffic Scotland will remotely monitor strategic traffic flow in the vicinity of the high wind incident. Where CCTVs are unavailable they will rely on reports from the Police, ISUs or Councils of congestion problems.

5	> 80 mph with a rising pattern	FORTH ROAD BRIDGE CLOSED	Findlay Irvine	Advises Amey and continues to monitor real -time wind speed.
			Amey	Phone Police Scotland. Advise Traffic Scotland, Edinburgh and Fife Councils by e-mail. Advise Ambulance Control .
				Close bridge to all traffic. Select plan control for Bridge closed to divert via Kincardine on MS301/302/316. Inform Bridge Manager and FRB Major Bridge Manager and Transport Scotland contact list, as per section 8. Request appropriate signage from Traffic Scotland request an RRN number and record in Daily Log Book. Change message on Information line answer machine. Update FRB Website. Advise mainrReception staff. Issue Group Email – <b>QD 006-4</b> .
				Set out traffic management for bridge closure and follow procedures in FETA Procedures PO02 and PO037.
			Police Scotland	Implements procedure to close bridge in conjunction with Amey.
			Traffic Scotland	Populates the Traffic Scotland website and pushes incident related data to VASPS and other media.
				Sets strategic VMSs to ' <b>FORTH ROAD BRIDGE CLOSED</b> '.
				Where monitoring CCTVs are available Traffic Scotland will remotely monitor strategic traffic flow in the vicinity of the high wind incident. Where CCTVs are unavailable they will rely on reports from the Police, ISUs or Councils of congestion problems.

Title: Amey Forth Road Bridge High Wind Management Plan

Mandatory

Generic

Guidance

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SPEED

WIND

<p>&lt; 80 mph for a continuous period of 30 min and wind pattern is falling</p> <p><b>FORTH ROAD BRIDGE CLOSED CARS ONLY</b></p>	Findlay Irvine	Advises Amey and continues to monitor real -time wind speed.
	Amey	Seek Met Office advice. Check bridge structure and carriageway for debris/damage before opening the bridge to cars only. Phone Police Scotland. Advises Traffic Scotland, Edinburgh and Fife Councils by e-mail. Advise Ambulance Control. Change bridge MS/L signs to plan control ' <b>STRONG WINDS</b> ' and ' <b>30mph</b> '. Accept new alarm level of 65mph on Findlay Irvine PC. Inform Bridge Manager and FRB Major Bridge Manager and and Transport Scotland contact list, as per Section 8. Request appropriate signage from Traffic Scotland control, request an RRN number and record in Daily Log Book. Change message on Information line answer machine. Update FRB Website. Advise Admin. Staff in Main Reception. Advise Ambulance Control and DFDS Seaways. Issue Group Email - <b>QD 006-5</b>
		Confirm reopening of bridge by telephone call to Traffic Scotland.
	Police Scotland	Implements procedure to open bridge in conjunction with Amey.
	Traffic Scotland	Sets strategic VMSs to ' <b>FORTH ROAD BRIDGE CARS ONLY</b> '.
		Populates the Traffic Scotland website and pushes incident related data to VASPS and other media.
		Where monitoring CCTVs are available Traffic Scotland will remotely monitor strategic traffic flow in the vicinity of the high wind incident. Where CCTVs are unavailable they will rely on reports from the Police, ISUs or Councils of congestion problems.

Title: Amey Forth Road Bridge High Wind Management Plan

Mandatory

Generic

Guidance

Contract Specific

## 8. Contact details

Key contact details are also held on the Amey Control Room management system.

Organisation	Department	Contact	Email	Tel. No.
Transport Scotland	Traffic Scotland Operator (TSOp)			
	Transport Scotland Media Office (TSMO)			
	Director (D)	Roy Brannen		
	Strategic Impacts Manager (SIM)	Stewart Leggett		
	Transport Resilience Team (TRT)			
	Transport Emergencies Mailbox (TEM)			
	National Network Manager (NNM)	Graham Edmond		
	Chief Bridge Engineer (CBE)	Wayne Hindshaw		
	Bridges Manager (BM)	Cameron Gair		
Met Office	Forecasters			
	Account Manager			
Amey	Operating Company Control Room	Duty Engineer (DE)		
Findlay Irvine	Support			
Traffic Scotland	Traffic Scotland Operator	or Duty Officer		
Police Scotland	Edinburgh Control Room			
Police Scotland	Trunk Road Traffic Management East Command Area	Police Constable (Mon-Fri 9-5)		
	Operational Support	Located in		

Title: Amey Forth Road Bridge High Wind Management Plan

Mandatory

Generic

Guidance

Contract Specific

	Division of Police Scotland	Traffic Scotland		
Scottish Fire & Rescue Service	Fife			
	Central			
	Lothian			
	Dundee			
Scottish Ambulance Service	Ambulance Control			
Coastguard				
Road Haulage Association				
Freight Transport Authority				
Edinburgh Council	Edinburgh Bus Station			
Fife Council				
Forth Ports Authority	Navigation			
	Grangemouth			
	Leith			
Stagecoach	Head Office			





Title: Amey Forth Road Bridge High Wind Management Plan

Mandatory

Generic

Guidance

Contract Specific

	Central FM		
	InrixMedia		
	Kingdom FM		
	Radio Clyde		
	Radio Forth		
	STV News		
Hauliers			

Title: Amey Forth Road Bridge High Wind Management Plan

Mandatory

Generic

Guidance

Contract Specific

Hauliers (continued)			

In addition to the stakeholders to be contacted in accordance with the Intervention Thresholds coloured chart and lists above a full closure of the Forth Road Bridge and closure to high sided vehicles will be deemed to be a Critical Incident. All other vehicle, pedestrian and cycle restrictions due to high winds will be Minor Incidents in accordance with Schedule 7 Part 3. Incident notification shall be in accordance with Schedule 7 Part 3 Annex 7.3/A and the classification of the incident.