Multi-level Alignment of Regional Approaches to Critical Infrastructure Resilience by Learning from Experience

Deliverable 2.4: Visit Reports – All three institutional partners will host visits open to up to 10 workshop participants (Amsterdam, Scotland, Milan) to show and share their on-going practices.

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4th International Workshop on Regional Critical Infrastructure Resilience:

"Sharing Experiences and Best Practices for the Implementation of Regional Critical Infrastructure Resilience Strategies"

Visits Report

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Acknowledgements:

Organisers:

- James Urquhart, Scottish Government
  - email james.urquhart@scotland.gsi.gov.uk
- Robert Gibson, Scottish Government
  - email robert.gibson@scotland.gsi.gov.uk
- David Bamaung, Scottish Government
  - Email david.bamaung@scotland.gsi.gov.uk
- Ross Baird, Scottish Government
  - Email ross.baird@scotland.gsi.gov.uk
- Paul Scobbie, Scottish Government
  - Email paul.scobbie@scotland.gsi.gov.uk

1. Aim, Objectives and Format of the visits

Aim

To support the delivery of task within the MiRACLE Project namely:

Task 2 – "Sharing Experiences and Best practices for the Implementation of Regional Critical Infrastructures Resilience Strategies". Scottish Government hosted visits to 2 key locations, where examples of good/best practice CIR work in Scotland was shared with delegates.

Objectives

Share examples of Critical Infrastructure Resilience on-going practices with project partners in order to support:

- Identification of Best Practices on regional CIP/R programmes at international scale (EU and non-EU).

- Development of guidelines for the implementation of regional CIP/R programmes.

Format

- Date: 9 October 2014.
- Venues: Grangemouth Refinery and Petrochemical Complex.
  The Traffic Scotland National Control Centre.
- Type: Presentations, Interactive Sessions and Site Tours.

2. Visits Programme

Thursday 9 October

Good Practice CIR Visits

0830	Buses leave event Hotel (2 buses).
0930	Arrival at venue.
1000	SESSION 1 - Commence visit.
	Group 1 – Grangemouth Refinery.
	Group 2 – South Queensferry (MART).
1200	Visit concludes.
1230 – 1330	LUNCH – Inchyra Grange Hotel, Grangemouth.
1400	SESSION 2 - Commence visit.
	Group 1 – South Queensferry (MART).
	Group 2 – Grangemouth Refinery.
1600	Visit concludes.
1700	Buses arrive at event Hotel.
1900	Marriott Hotel, Glasgow, reception area for pre-dinner gathering.
1930	Dinner and networking

3. Synopsis of Visits

Task 2 – "Sharing Experiences and Best practices for the Implementation of Regional Critical Infrastructures Resilience Strategies". As part of the delivery of this project task Scottish Government hosted visits to 2 key locations, where examples of good/best practice CIR work in Scotland was shared with delegates.

- **Grangemouth**

The refinery at Grangemouth has been operational since 1924 and the chemicals plant since 1951. Both sites have grown since then in response to the development of the North Sea.

Occupying almost 1,700 acres, the Grangemouth site is situated on the shores of the Firth of Forth, west of Edinburgh. The complex directly employs 1,350 workers, with a further 2,000 contractors working on the site and it is estimated that 10,000 jobs rely on the site.

Grangemouth benefits by having access to crude oil and gas from the North Sea, the complex takes these raw materials and transforms them in to petrol, other fuel products and a wide range of chemicals. The complex operates 24 hours a day, 365 days a year.

Refining:

Grangemouth refinery, the only one in Scotland, takes its crude oil feedstock from nearby Kinneil oil and gas processing plant or from the Finnart Ocean Terminal on the west coast of Scotland. The refinery turns the feed-stocks into almost 9 million tonnes of fuel every day and supplies the majority of Scotland with fuel (~70% of filling stations in Scotland).

Fuel is distributed via the site's road tanker terminal, rail terminal or by sea tanker at jetties at both Grangemouth and Finnart. The site also provides aviation fuel for Scotland's major airports - Glasgow, Edinburgh and Prestwick.

The site holds ISO14001 accreditation, the internationally recognised standard for environmental management systems, by demonstrating high environmental standards and compliance with legislation.

Petrochemicals:

The Grangemouth petrochemical plants currently uses gas separated from the oil stream at Kinneil processing plant as the main feedstock, although with transition to a shale gas based facility by 2016. Europe's largest ethane tank (60,000 m^3 capacity)will be constructed at the site to allow feed-stocks to be imported from across the world.

The petrochemicals plant currently produces 1 million tonnes of products each year, including ethylene, propylene, butadiene, polyethylene, polypropylene and ethanol.

Purpose of visit:

- Overview of site.
- Importance of site at Local, Regional (Scottish) and National (UK) levels.
- Risks, Vulnerabilities and Impacts – looking at case studies of previous events.
- Partnerships and Collaboration – Major Incident Co-ordination Centre, Local Resilience Forum, Scottish Government, Department of Energy and Climate Change.
- Tour of site.

- **Transport Scotland – Traffic Scotland National Control Centre**

The Control Centre is the 'hub' for all Traffic Scotland services and activities, housing dedicated staff responsible for the operation and maintenance of Intelligent Transport Systems (ITS). These systems facilitate both proactive monitoring of real time traffic flows and also enable implementation of appropriate responses to reduce congestion and warn road users of current incidents on the network.

In early 2013, the Traffic Scotland Service relocated to a new state of the art, purpose built Control Centre near the site of the new Forth Crossing (recently named as 'The Queensferry Crossing').

The Traffic Scotland National Control Centre incorporates significant technological and logistical advances which enable improvements to the service. These include:

- Purpose built Video Wall for network monitoring.
- Improved acoustics for live 24/7 radio broadcasts.
- Increased capacity for Multi Agency Response Team.
- Improved layout enabling better inter-agency communications.

In addition to responding to current incidents across the road network, Traffic Scotland is also at the forefront of proactive planning for upcoming events which could impact on the road network, thereby ensuring that all trunk road users benefit from the best real time travel information available.

Purpose of visit.

- Co-ordination Centre and Multi-Agency Collaboration.
- Resilience Arrangements and Events.
- Communications and Social Media.
- Queensferry Crossing.

- Tour of site.

4. Delegate Evaluation

Delegates were provided with an evaluation form in their delegate packs relative to the Visits and Workshops on Alignment and the CIR International Network. Delegates were able to complete the evaluation form during the course of the event or retrospectively, via an electronic version.

Delegates were asked to comment under the following headings:

a) Most significant learning.
b) Key suggestions for improving the alignment of Regional, National and EU CIR arrangements.
c) Key suggestions for building an effective collaborative approach to enhance alignment.
d) Expectations in terms of 1). Visits, 2). Venues, 3). Presentations / Interactive Sessions, 4). Hotel, 5). Event materials.
e) Issues (policy or response) for further consideration by International Network.
f) Additional comments.

Delegates were very positive about the structure and delivery of the visits, indicating that the aims and objectives were met. The responses are reproduced at Annex C.

Annex A

Visit Report
Traffic Scotland National Control Centre, South Queensferry, Scotland and the Traffic Scotland Information Service

Authors:
Paul Scobbie, Robbie Harrison (Scottish Government)
Peter Cullen (Transport Scotland)

Issue date: November, 2014

Introduction

As part of the 2 day MiRACLE Conference hosted in Glasgow, Scotland on 9th and 10th October 2014 officials from Transport Scotland kindly hosted visits to the Traffic Scotland National Control Centre in South Queensferry, near Edinburgh. Stein Connelly from Transport Scotland provided a tour of the facility and presentations on the purpose of Transport Scotland, where it fits with the wider resilience role and how the Traffic Scotland Information Service has added value to road users, operators and responders were delivered by Stewart Leggett, William Millar and Peter Cullen respectively.
This report provides an overview of the transport network in Scotland and the role of Transport Scotland. It then focusses on Traffic Scotland's Information Service.

Critical Infrastructure Protection/Resilience Context and Scope

Scotland is a country which forms part of the United Kingdom (UK). It directly borders England to the south and covers the Northern third of the UK mainland. Its total land area is 78,387 km^2 which includes more than 790 islands. It has a population of 5.3 million with the majority of its major cities and towns being located in the central belt. This region covers a wide area between its two largest cities, Edinburgh in the East and Glasgow in the West.

The country has 5 international airports and 11 regional airports. Scotland's rail network has approximately 340 railway stations and 3000 kms of track. Regular ferry services operate between the Scottish mainland and the many of the inhabited islands. These ferries are primarily run by private companies however some are operated by local councils or seasonal operators. Other ferry routes, served by multiple companies, connect to Northern Ireland, Belgium, Norway, the Faroe Islands and also Iceland. Scotland has 3530 km's of trunk roads which are managed by Transport Scotland and 52,238 km's of local roads which are managed by 32 Local Authorities.

Scotland has limited self-government within the United Kingdom, as well as representation in the UK Parliament. Executive and legislative powers have been devolved to the Scottish Government and the Scottish Parliament in Edinburgh respectively since 1999. The UK Parliament currently retains control over reserved

matters specified in the Scotland Act 1998, including UK taxes, social security, defense, international relations and broadcasting. The Scottish Parliament has legislative authority for all other areas relating to Scotland, as well as a limited power to vary income tax in Scotland

Transport Scotland is a Scottish Government body established in 2006 to deliver a safe, efficient, cost-effective and sustainable transport system for the benefit of the people of Scotland. It has policy responsibility for the 4 main modes of transport infrastructure namely

- Trunk Roads and Bridges network
- Ferries Ports, Canals and Harbours
- Aviation
- Rail network.

It also delivers the concessionary fares scheme in Scotland.

The Department for Transport (DfT) is the UK Government Department responsible for the security and resilience of rail, aviation and ports/harbours in relation to critical national infrastructure. In Scotland, the strategic roads network is devolved to the Scottish Government.

Transport Scotland is a body which directly employs 480 staff and indirectly supports 12,500 jobs across Scotland. It has an annual budget of £2bn. It is responsible for overseeing a number of substantial infrastructure projects including the new crossing spanning the River Forth (Queensferry Crossing), the Aberdeen Western Peripheral by-pass and the upgrading of the A9 to dual carriageway between Perth and Inverness.

Traffic Scotland National Control Centre (TSNCC)

Network Operations manages the Traffic Scotland Intelligent Transport System (ITS) and associated web services. Network Operations is based within Transport Scotland. The Traffic Scotland National Control Centre (TSNCC) is located at South Queensferry near Edinburgh. This is at the heart of delivering the Agency's mission to monitor control and inform users about road conditions on this network. The Centre incorporates significant technological and logistical advances which enable

improvements to delivery of the service. It also hosts the Multi Agency Resilience Team (MART) which is formed whenever a major disruptive event to transport infrastructure takes place.

- Traffic Scotland is currently operated by the Traffic Scotland Operator, Amey, from the TSNCC. The TSNCC staff have the role of implementing traffic control and network management across the Scottish trunk road network.
- From the TSNCC, the trunk road network traffic conditions are monitored, using various technologies including the use of sensors buried in the road, automated number plate recognition (ANPR) and closed circuit television cameras. The TSNCC have developed operational relationships with the following organisations to collect and distribute relevant traffic information:
  - trunk road maintenance operators.
  - local roads authorities.
  - bridge managers.
  - the police.
  - the media.
  - motoring organisations.
  - other interested parties.
- Traffic Scotland Operators control the Traffic Scotland system and also answer the Emergency Roadside Telephones within the Trunk Road Network
- Trunk road maintenance operators, who are responsible for maintaining the trunk road network, advise the TSNCC of planned roadwork's and roadwork's that may cause delays that are currently underway.
- The TSNCC therefore plays a key role in pulling together traffic information and distributing it to all interested parties, including road users.

Risks Addressed

The main risk Traffic Scotland faces is linked to severe weather incidents. The disruptions caused by strong winds, heavy rain, excessive heat, snow, ice or even volcanic ash clouds can combine to cause problems across the transport infrastructure on a regular basis, particularly the trunk roads network. Scotland regularly faces challenging weather events. The impacts are usually relatively short lived, however, they can be extremely disruptive. For example, it is not uncommon for landslides affecting more remote local roads to cause 150 plus km diversions. Repairs may take months to complete. Cancellation of ferries to island communities can strand residents for many days. Problems on the main trunk roads networks have caused significant delays to journey times and affected the public's ability to get to or from work. Over the course of a severe winter these impacts can cost £ hundreds of millions, in traffic disruption alone.

In addition, road works, congestion and road traffic accidents also combine to add to disruption and Traffic Scotland works to minimise the impacts and provide the public, operators and other stakeholders with accurate information as to the causes and solutions to any disruptions.

They have plans to cope with a range of disruptive threats and hazards identified in the UK's National Risk Assessment. Clearly, the ability to move goods, services, people and deliver essential services relies on a sound transport infrastructure. This facilitates key staff getting to and from work as well as key fuels, chemicals etc.

being delivered to plants, foodstuffs being delivered to supermarkets etc. However, key to this is the ability to collate and efficiently disseminate information from a range of sources delivered to users to provide an accurate picture of the prevailing traffic conditions.

TRAFFIC SCOTLAND INFORMATION SERVICE

Critical Infrastructure Protection/Resilience Concepts

The organisation considers that its key enablers are the effective use of technology, communications, stakeholder management and network operations to deliver business-as-usual priorities. All of these form part of the Traffic Scotland Information Service, which is best described as a multi-platform tool for the dissemination of timely and accurate information regarding travel routes throughout Scotland to the public and responder community.

Collaborative Approach and Process

Transport Scotland adopts a strategic approach to investment and development which fits with both European and domestic policy and exploits technology innovation for the benefit of the user.

These policy drivers include the European Commission's Intelligent Transport Systems Directive which relates to the provision of a common platform for travel information on the Trans European Roads Network. This has been previously progressed through a variety of mechanisms. For example, the EC's Easyway Project is driven by national roads authorities and operators with associated partners including the automotive industry, telecom operators and public transport stakeholders. It sets clear targets and identifies a set of necessary Intelligent Transport Systems to deploy (Traveller Information, Traffic Management and Freight and Logistic Services). It is an efficient platform that allows the European mobility stakeholders to achieve a coordinated and combined deployment of these pan-European services.

However, all of the above also supports national policy objectives (listed below) under Scotland's National Transport Strategy to:

- Improve journey time and connections.
- Improve quality, accessibility and affordability.
- Reduce emissions.

Barriers

The key to overcoming barriers when implementing changes in service delivery is to have a clear vision and develop a strategic plan with clear objectives. Organisations can sometimes be reluctant to deploy new technologies so particular emphasis should be made to demonstrate a cost benefit analysis on a project by project basis and to articulate what this delivers in terms of improved services for the user. Information technology is fast moving therefore keeping up with the pace of change can be challenging. As a result any strategic approach needs continuous monitoring and development. Adopting this evolutionary approach makes it easier for an

organisation to maintain its development momentum especially if it can demonstrate successful delivery.

Co-ordination of Stakeholders.

Stakeholders in the delivery of traffic information all have a vested interest in providing a “joined up” service. This is achieved by the 3 main actors in this process – Traffic Scotland, Police Scotland and Operating Companies co-ordinating their effort by gathering and sharing information from their control rooms and feeding this into the Traffic Scotland National Control Centre to facilitate “joined up” messages disseminated via all information platforms. This allows the service to deliver “one single source of truth” which external stakeholders and consumers can rely upon.

The lists below provide an overview of the various organisations involved in providing and receiving information as part of the Traffic Scotland Information service.

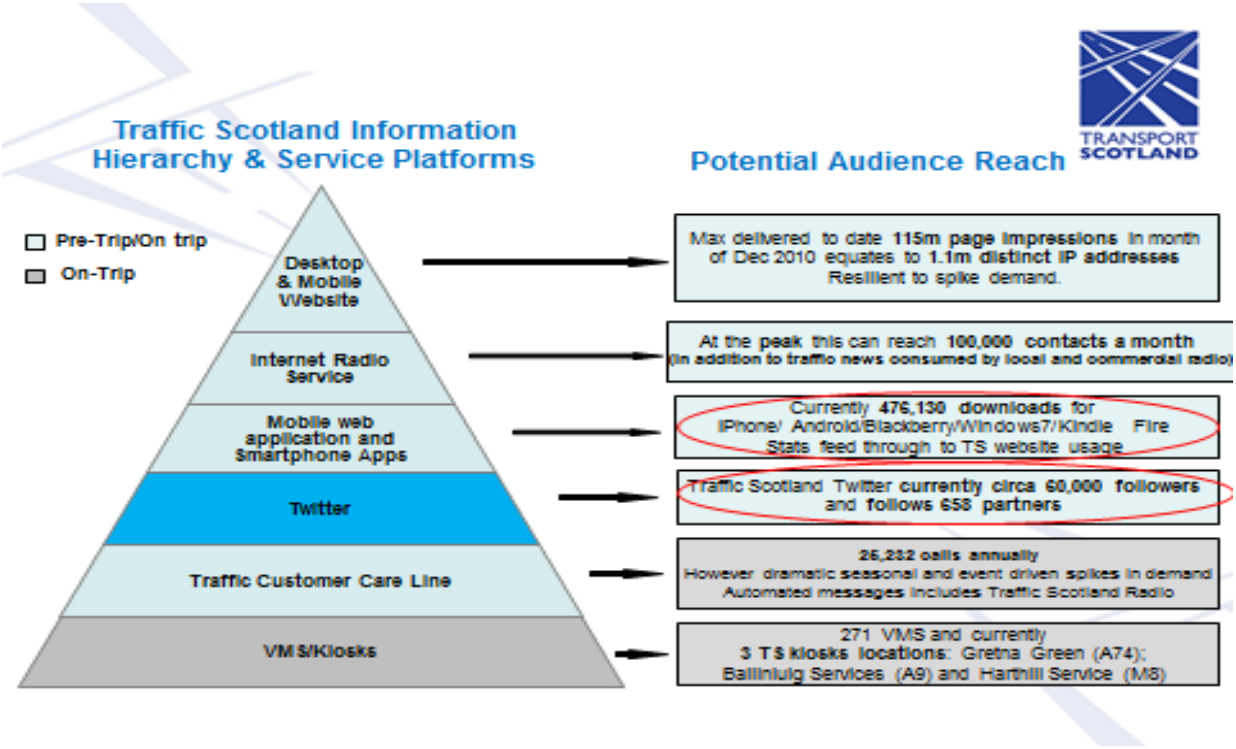
Stakeholders

- Police Scotland.
- Met Office.
- Road Operating Companies & DBFOs.
- Network Rail.
- Scotrail.
- Freight Transport & Road Haulage Associations.
- Scottish Government.
- Confederation of Public Transport.

External Engagement/Partners

- Scottish Government.
- Scottish Local Authorities.
- Police, Fire and Ambulance.
- NHS Scotland.
- Scottish Environment Protection Agency.
- Power and Telecoms Utility Companies.
- Scottish Water.
- Health and Safety Executive.
- Voluntary Sector.

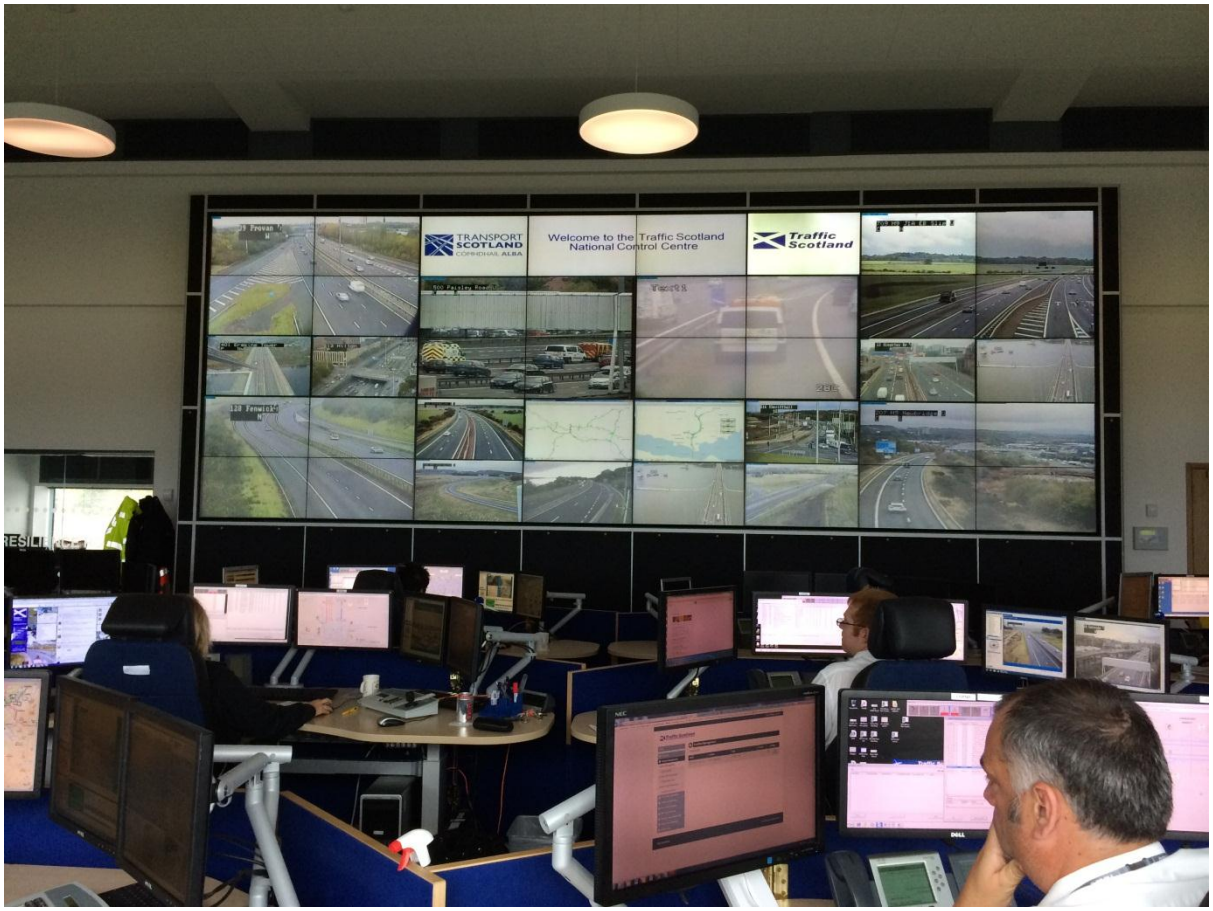
Planned Results and Resources



Using the range of options described above the Traffic Scotland Information Service has an extensive reach into the public domain. The smartphone app has over 500,000 downloads and the Twitter feed has over 65,000 followers.

Key Messages

- As an organisation, you must develop a strong vision through a strategic plan, setting out where you want to be, how you will get there, your key objectives and what success will look like.
- Don't try to do it all at once. Develop a programme of improvement across key areas, set priorities and set a timeline for delivery.
- Data quality is king. It must be accurate, timely and reliable. This maintains credibility and trust of the user and builds audience reach, especially through the use of viral marketing.
- Maximise your sphere of influence. In the world of an increasingly "connected" user, be prepared to use all available communication channels to maximise your reach to the user (pre-trip/on-trip).
- It is important to monitor user feedback to calibrate and fine tune what you are communicating to the user and how.
- Try to ensure consistency of the messages across all delivery platforms.
- When using social media be as transparent and as open as you can when communicating with the user (They don't like you being defensive).
- Use social media monitoring to sense check whether you are delivering to the user what they require.
- Never be afraid to innovate.



Traffic Scotland National Control Centre (TSNCC)

Annex B

Visit Report, Grangemouth Refinery and Petrochemical complex.

Authors:
Ross Baird, Paul Chapman (Scottish Government)

Introduction

On 9th October approximately 50 delegates from the 4th International Workshop on Critical Infrastructure Resilience attended a good practice site visit to Petroineos Refinery and Ineos Chemical complex in Grangemouth. The theme of the event was "Sharing Experiences and Best practices for the Implementation of Regional Critical Infrastructures Resilience Strategies". The visit covered:

- An overview of site.
- Importance of site at Local, Regional (Scottish) and National (UK) levels.
- Risks, Vulnerabilities and Impacts – looking at case studies of previous events.
- Partnerships and Collaboration – Major Incident Co-ordination Centre, Local Resilience Forum, Scot Government, Department of Energy and Climate Change and Communities.
- Tour of site.

This report provides further information on the site and focusses on the collaboration between the public and private sectors in the area to provide an effective emergency planning and response capability**.**

Grangemouth Refinery and Petrochemical Complex

The refinery at Grangemouth has been operational since 1924 and the chemicals plant since 1951. Both sites have grown since then in response to the development of the North Sea.

Occupying almost 1,700 acres, the Grangemouth site is situated on the shores of the Firth of Forth, west of Edinburgh. The complex directly employs 1,350 workers, with a further 2,000 contractors working on the site and it is estimated that 10,000 jobs rely on the site.

Grangemouth benefits by having access to crude oil and gas from the North Sea, the complex takes these raw materials and transforms them in to petrol, other fuel products and a wide range of chemicals. The complex operates 24 hours a day, 365 days a year.

Refining

Grangemouth refinery, the only one in Scotland, takes its crude oil feedstock from nearby Kinneil oil and gas processing plant or from the Finnart Ocean Terminal on the west coast of Scotland. The refinery turns the feedstocks into almost 9 million tonnes of fuel every day and supplies the majority of Scotland with fuel (~70% of filling stations in Scotland).

Fuel is distributed via the site's road tanker terminal, rail terminal or by sea tanker at jetties at both Grangemouth and Finnart. The site also provides aviation fuel for Scotland's major airports - Glasgow, Edinburgh and Prestwick.

The site holds ISO14001 accreditation, the internationally recognised standard for environmental management systems, by demonstrating high environmental standards and compliance with legislation.

Petrochemicals

The Grangemouth petrochemical plants currently uses gas separated from the oil stream at Kinneil processing plant as the main feedstock, although will transition to a shale gas based facility by 2016. Europe's largest ethane tank (60,000 m^3 capacity) will be constructed at the site to allow feedstocks to be imported from across the world.

The petrochemicals plant currently produces 1 million tonnes of products each year, including ethylene, propylene, butadiene, polyethylene, polypropylene and ethanol.

Resilience

The Grangemouth Petroleum and Chemical Complex includes a number of Chemical Manufacturing Sites located adjacent to the town of Grangemouth. Many of these Companies operate potentially hazardous processes which are regulated under Control of Major Accident Hazards (COMAH) Regulations 1999, as either 'Top Tier' or 'Lower Tier' sites. COMAH is the implementation of the Siveso II Directive in the UK.

There is a possibility of an incident occurring in one of the plants which could result in serious danger to human health in the local community and / or damage to the environment. In addition there may be a "Domino Effect", where the effects of any incident may spread to adjacent sites, causing further damage and increased consequences for the off-site areas.

The emergency planning for the area is divided into two parts:

- **The Major Incident Control Committee (MICC)**

The Major Incident Control Committee (MICC) was established on 9th October 1968 and has existed continuously to the present date, in order to provide an effective means by which companies within the Grangemouth Petroleum and Chemical Complex can provide mutual aid to one another in response to a major incident.

MICC is a partnership consisting of representatives from the Chemical Companies, Emergency Services, Local Authority, Health Authorities, Regulators and appropriate utilities, and provides a forum for the Chemical Companies, the Emergency Services, the Local Council and other Organisations to discuss and exercise Emergency Response Plans.

The MICC Committee is primarily involved in the preparation for, and response to, emergency incidents and one of its functions is to supply scientific and technical advice to those managing the incident and its consequences. The MICC Chairman also chairs the Technical and Scientific Advice Sub Group of the East of Scotland Regional Resilience Partnership (RRP).

MICC plays a vital role in emergency preparedness and response within a highly industrialised and heavily populated area. All those fulfilling roles within MICC should be aware of the importance of their responsibilities to the workforces, the community, individual company reputations and the wider chemical industry reputation.

During an incident the MICC has the following objectives :

- To work with the organisation(s) affected to help contain and control incidents so as to minimise the effects and to limit damage to persons, the environment, and property.
- To implement the measures necessary to protect persons and the environment from the effects of an emergency that affects, or has the potential to affect areas other than the scene of the incident.
- To communicate the necessary information to the public and to the emergency services and authorities concerned.
- To assist the organisation affected with the restoration and clean-up of the environment. The primary responsibility for this lies with the company that has had the incident. The other members of MICC may be able to provide assistance through mutual aid.

- **Falkirk Council – Off Site Emergency Plan**

The COMAH Regulations give the statutory duty to Falkirk Council to prepare an Off Site Emergency Plan for those sites that are categorised as Top Tier. MICC supports this Off Site Plan and is a key linkage between the Off Site Plan and the Company On Site Plans.

The aim of this off site plan is to ensure a co-ordinated and rapid deployment of the resources necessary to help deal with the consequences of a Major Incident, and to ensure that the responding organisations have the appropriate details to enable them to respond effectively.

Although the Plan is a consequence of a COMAH requirement, it also links directly into Civil Contingencies requirements, ‘Preparing Scotland’ local Integrated Emergency Management arrangements and Falkirk Councils Emergency Response Procedures.

The objectives of the Plan are:

- Containing and controlling incidents so as to minimise the effects, and to limit damage to persons, the environment and property.
- Implementing the measures necessary to protect persons and the environment from the effects of major accidents.
- Communicating the necessary information to the public and to the Emergency Services and authorities concerned in the area.

- Providing for the restoration and clean-up of the environment following a major accident.

Command, Control and Co-ordination (Management)

The plan uses three levels:

Dependent upon the nature and severity of the incident it may not always be necessary to set up all three levels of management.

Strategic (Gold)

The purpose is to formulate the overall policy in which response to an emergency will be made and to link into national arrangements.

Strategic Management will be exercised from Police Scotland, Randolphfield, Stirling.

Upon notification that a Major Accident or Major Incident with confirmed off-site consequences has occurred, the Local Resilience Partnership (formerly the Strategic Co-ordinating Group - SCG) will be activated. (LRP Activation Plan).

Tactical (Silver)

The purpose is to supply the information needs and support both strategic and operational management; to implement strategic policy; determine priority in allocating resources; plan and co-ordinate when tasks will be undertaken and obtain resources as required.

Tactical Management will be exercised from the Incident Management Suite (IMS) within Grangemouth Police Office under the direction of the Police Tactical Commander. In the unlikely event that these facilities cannot be used, the agreed default location is Falkirk Police Office. Tactical Management will be activated upon notification of:-

- *a Preliminary Warning of possible off-site consequences and/or*
- *confirmation of a Major Accident (Major Incident)*

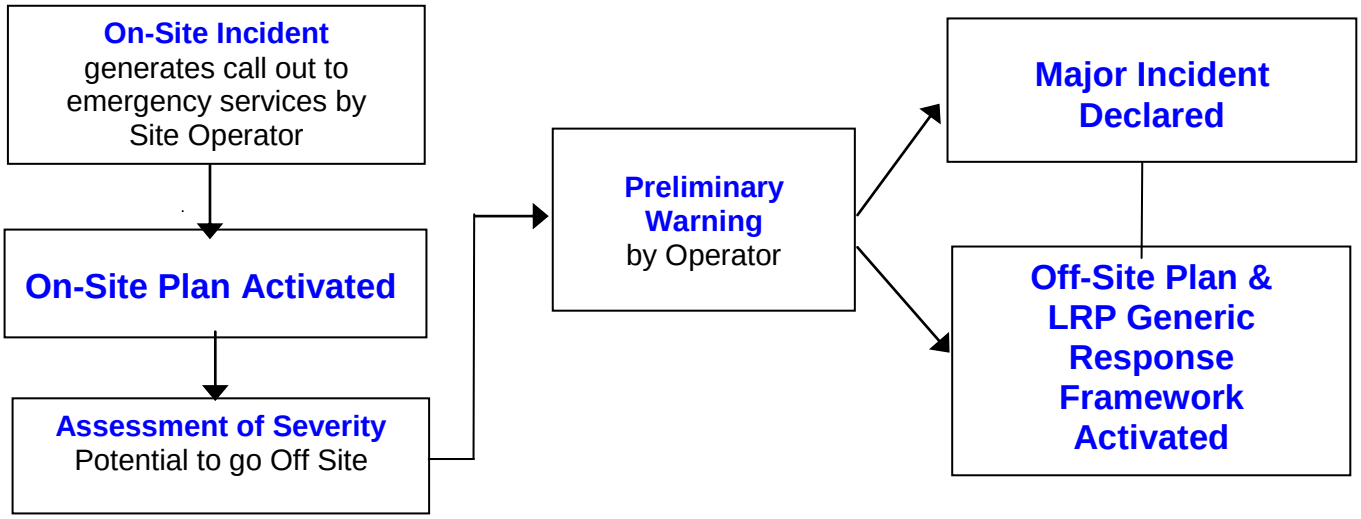
Tactical Management will be activated by Police Scotland without undue delay

Operational (Bronze)

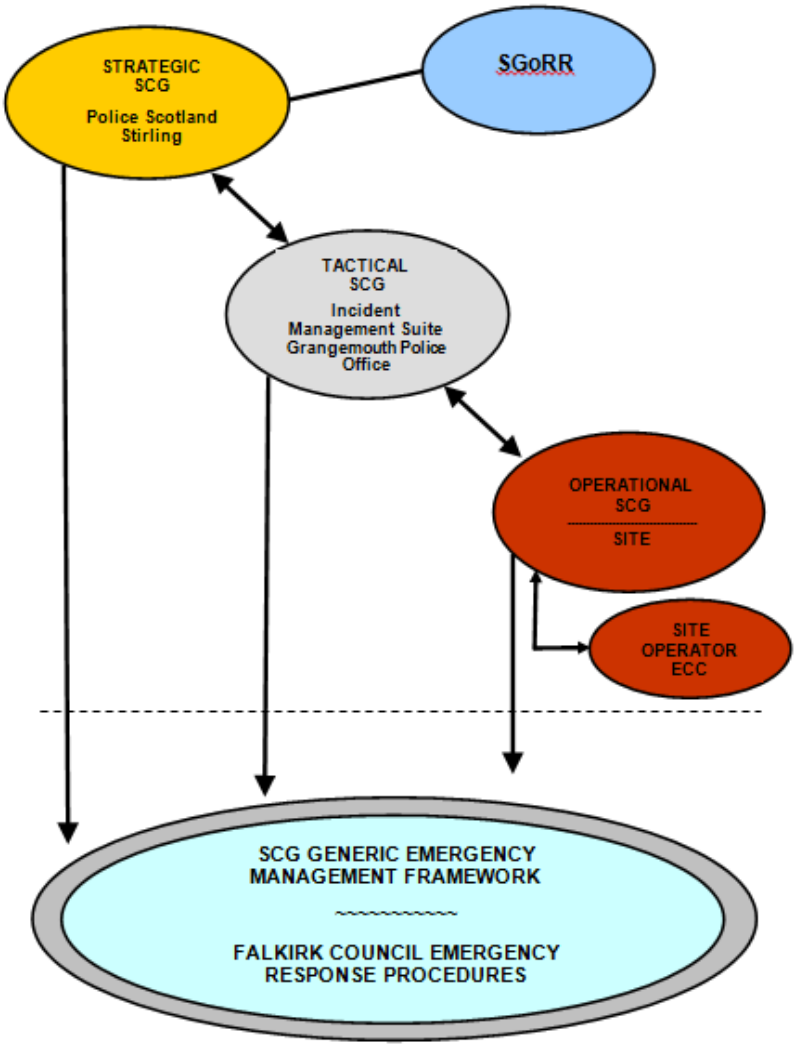
This level of management will carry out the required measures necessary to deal with and contain the immediate on-site situation.

Operational Management will be exercised from an agreed location (Forward Control) at the scene of the on-site incident. This will normally be the responding agencies 'Control' point or vehicle, for a Fire or Toxic release situation this will be the Fire & Rescue Service, for any other situation this will be the Police. Assistance will be provided at this level of management by representatives of the Operator and site

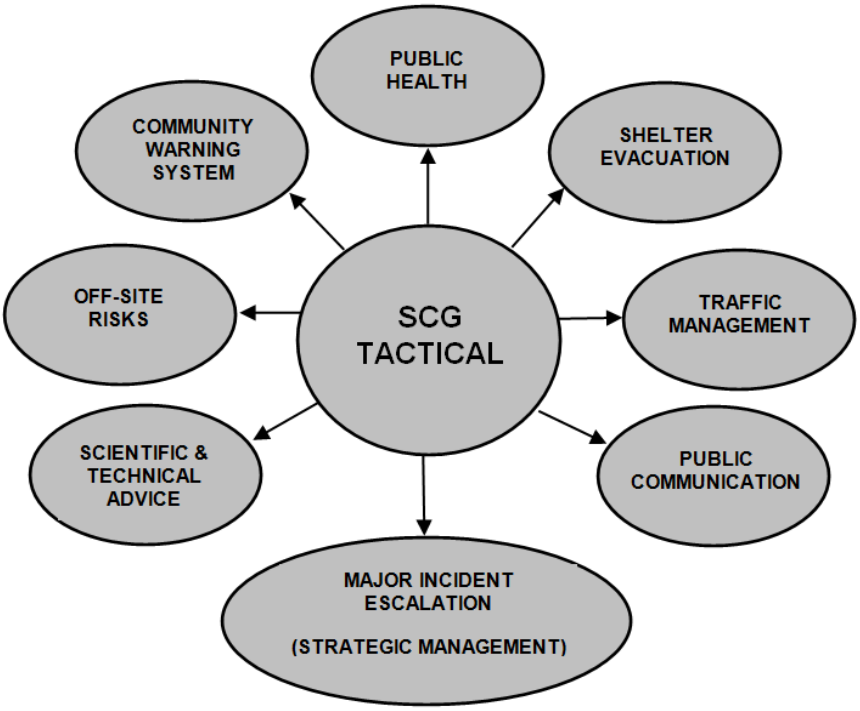
Activation



Response Management Structure



Tactical Considerations



Domino Effect

Domino sites are defined as those sites or establishments where the likelihood or consequences of a Major Accident may be increased because of the location and close proximity of other COMAH establishments and the hazardous substances contained in those establishments. The nature of the Grangemouth Industrial Complex, where a significant number of establishments are in close proximity, means that Domino consequences must be borne in mind from the very outset of any Major Incident or Accident scenario.

The companies have all been required by the Health & safety Executive (HSE), to provide each other (in their groups) information, in writing, regarding the nature and extent of the overall hazard of a Major Accident.

The companies have also been requested to provide information to Falkirk Council, for the purposes of this plan, about which they could trigger major accidents at other establishments.

The above information is given in a COMAH context but there are also domino consequences in a wider Grangemouth area context that must be borne in mind by Incident Managers.

The five main wider domino consequences are:
(i) Shutdown of North Sea Forties Oil Pipeline system.
(ii) Full or partial shutdown of Oil Refinery.
(iii) Closure or disruption to the Fuel Distribution Terminals.

(iv) Closure or disruption to Forth Ports, Port of Grangemouth.
(v) Major Accident to the Environment (MATTE).

There are other domino consequences that are likely to feature dependent upon the situation encountered at the time, these could include disruption caused by utility failure, impact upon road and rail routes, and interdependencies between the COMAH company establishments.

Warning & Informing

- Grangemouth Community Warning System:

The primary option for warning and informing in the case of a toxic gas release is the activation of the community warning system.

This system transmits warning tones and can give verbal instructions to the community. The system is tested twice yearly and all residents in Grangemouth have been encouraged to familiarise themselves with the warning tones and their response to reacting to the alert i.e.

'GO IN, STAY IN AND TUNE IN'

The system consists of eleven warning masts which are capable of being activated all at once, or individually if required.

- Major Incident and Public Communications:

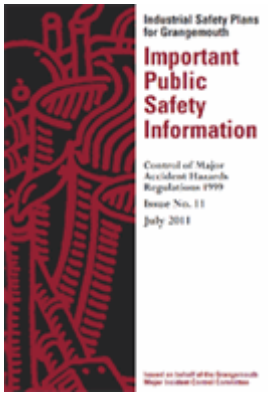
The Local Resilience Forum (LRF) has an agreed and well developed Major Incident and Public Communications Strategy that will be employed for a Major Incident or Emergency.

All levels of multi-agency management must recognise the importance and significance of:

- Early notification to LRF and partner agency communications practitioners.
- Early identification and verification of incident facts and detail.
- The immediate impact of modern social media attention and concern on incident management.
- Early determination of the need to warn and inform the community(s) directly affected (should the community warning system not be activated) and how that can be accomplished effectively.

- Information to the Public Prior to an Event:

The information below is circulated to residents and businesses within the FK3 postal area every 2 years.



Grangemouth Emergency Instructions

Grangemouth Important Public Information

Recovery

The planning around Grangemouth also includes arrangements for recovery intended to be both generic and flexible and capable of running alongside incident or emergency response measures. Particular objectives are:

- To ensure that support is immediately available to affected communities to deal with short term recovery issues (such as emergency accommodation (Rest Centres), temporary accommodation, food or subsistence, utility restoration etc.
- To ensure that the necessary foundations are in place for longer term recovery measures.
- To ensure that support is available to assist emergency responders in the Response phase.
- To ensure that the response is in alignment with that of any national measures directed towards response and recovery phases of emergency management.

The following issues are likely to be included within the recovery strategy:

- early consideration of opportunities for longer term regeneration and economic development.
- the involvement and co-operation of the community and other relevant agencies.
- the development of a concise, balanced, affordable action plan and capable of quick implementation.
- restoration of transport networks.
- utility and infrastructure restoration is co-ordinated and quickly achieved.
- support for the individual is put into place quickly (Care for People).
- pro-active and integrated support for businesses.
- environmental protection and recovery issues are co-ordinated.
- pro-active and integrated policy and practice on public/media communication.
- detailed and auditable records of activity and financial expenditure.
- identification and maximisation of potential funding.
- establishing effective arrangements for community involvement and liaison.

Annex C

List of delegates

LAST NAME	FIRST NAME	ORGANISATION	EMAIL
Delegates			
De Bruijn	Peter	Director Studio Veiligheid	peter.debruijn@studioveiligheid.net
Koletsis	Spyridon	KEMEA - The Centre for Security Studies, Greece	s.koletsis@yahoo.gr
Arnaoutidis	Panagiotis	KEMEA - The Centre for Security Studies, Greece	panarn@gmail.com
Sfetsos	Athanasios	KEMEA - The Centre for Security Studies, Greece	ts@ipta.demokritos.gr
Altenbrunn	Frank	Council of General Affairs Division, Federal Agency for Technical Relief (THW)	Frank.Altenbrunn@thw.de
Gordon	Gary	UK	
Tillotson	Sam	UK	
Hood	Gervase	Scotland Office	gervase.hood@scotland.gsi.gov.uk
Ferguson	Eilís	Northern Ireland Civil Service,	Eilis.Ferguson@drdni.gsi.gov.uk
Connelly	Paul	Eire Government	Paul.Connolly@defence.ie
Ryan	John	Regional Steering Group [South] Eire	john_ryan@corkcity.ie
Roche	John	An Garda Síochána (Irish Police)	Roche, John john.roche@garda.ie
Prouse	Mark	UK Department of Energy and Climate Change (DECC)	mark.prouse@decc.gsi.gov.uk

Brown	Colin	Police Scotland	colin.brown@scotland.pnn.police.uk
Colthart	David	Scottish and Southern Energy (SSE)	david.colthart@see.com
Gardner	Andrew	INEOS	andrew.gardner@petroineos.com
Lyons	Bill	Scottish Environment Protection Agency (SEPA)	Lyons B (Bill) bill.lyons@sepa.org.uk
Murphy	Mark	Scottish Water	Mark.murphy@scottishwater.co.uk
Strathearn	Dugald	DEFRA	dugald.strathearn@defra.gsi.gov.uk
Jensen	Peter	Metroselskabet I/S, DK-2300 Copenhagen S. Denmark	pjn@m.dk
Schwab	Maria	Institute for Environment and Human Security (UNU-EHS), United Nations University	schwab@ehs.unu.edu
McIlhatton	David	University of Ulster	d.mcilhatton@ulster.ac.uk
Wilson	Frank	Public Safety & Health Distric Kennemerland and Schiphol	frankwilson@btconnect.com
Buis	Marit	Veiligheidsregio Rotterdam-Rijnmond	Marit.Buis@veiligheidsregio-rr.nl
Bok	Maaike	Liander N.V., Arnhem	maaike.bok@alliander.com
Kouwenhoven	Ino	PWN (Water)	Ino.Kouwenhoven@PWN.NL
Zuurmond	Kim	VRK	KZuurmond@ggdkennemerland.nl

Stenneberg	Simon	VRK	sstenneberg@vrk.nl
Seen	Sjaak	Safety Region Rotterdam	j.seen@veiligheidsregio-rr.nl
Ornstein	Marijn	Schiphol Airport, Amsterdam	ornstein_m@schiphol.nl
De Lange-Heldens	Marleen	Hoogheemraadschap van Rijnland	marleen.lange@rijnland.net
Derksen	John	MoD	
Tenpierik	Maikel	ProRail	maikel.tenpierik@prorail.nl
Amarillo	Fabrizio	Fondazione Politecnico di Milano	Fabrizio Amarilli fabrizio.amarilli@polimi.it
Dimauro	Carmelo	Risk Governance Solutions	carmelo.dimauro@riskgovernancesolutions.eu
Trucco	Paolo	Fondazione Politecnico di Milano	Paolo Trucco paolo.trucco@polimi.it
Petrenj	Boris	Fondazione Politecnico di Milano	Boris Petrenj boris.petrenj@polimi.it
Secchi	Cinzia	Regione Lombardia	cinzia_secchi@regione.lombardia.it
Ceriani	Massimo	Regione Lombardia	Massimo_ceriani@regione.lombardia.it
Zangari	Roberto	Regione Lombardia	Roberto_zangari@regione.lombardia.it
Zaccone	Andrea	Regione Lombardia	zaccone_andrea@regione.lombardia.it

Event Organisers			
Urquhart	James	Scottish Government - CIRU	james.urquhart@scotland.gsi.gov.uk
Gibson	Robert	Scottish Government - CIRU	robert.gibson@scotland.gsi..gov.uk
Scobbie	Paul	Scottish Government - CIRU	paul.scobbie@scotland.gsi.gov.uk
Baird	Ross	Scottish Government - CIRU	ross.baird@scotland.gsi.gov.uk
Chapman	Paul	Scottish Government - CIRU	paul.chapman@scotland.gsi.gov.uk
Harrison	Robbie	Scottish Government - CIRU	robbie.harrison@scotland.gsi.gov.uk
Bamaung	David	Scottish Government - CIRU	david.bamaung@scotland.gsi.gov.uk

Speakers / Facilitators			
Gardner	Andrew	INEOS	andrew.gardner@petroineos.com
Millar	William	Transport Scotland	william.millar@transportscotland.gsi.gov.uk

Annex D

4TH International workshop on
Regional Critical Infrastructure Resilience:
"ALIGNING REGIONAL, NATIONAL AND EUROPEAN CIR APPROACHES"

DELEGATE EVALUATION

Expectations in terms of 1). Visits, 2). Venues,
1. Visits • The visits were well selected and very informative, providing useful input to discussions on Day 2. • In respect to the first day's events, the importance of managing the media response during a major event or incident. The case studies discussed were sobering in the simplicity of the small trigger that can escalate into a critical event in such a short space of time. Resilience is one of the vital elements to ensure the protection of the population at these times. • The visits were very high value – highly relevant, and a good contrast between major CI fixed infrastructure site and widespread transport issues. • Good organized. Maybe next time the return trip to the hotel could be earlier or later, now we had a lot of traffic • Yes, mostly. The presentations in the afternoon were somewhat one dimensional. The link between the critical aspect of the traffic network and strategic structures were not full developed. Given time I am of the view that this could have been achieved. This is perhaps understandable in the context of the everyday management of traffic throughout Scotland and this was explained very well. In other words the identification of the bridges as critical could have been further developed. The audience were I think able to extrapolate this concept from each of the presentations. They did stimulate conversation during and after the presentations which achieved the overall objective. • Please also see above. The Grangemouth Refinery and presentation were excellent and appropriate. Case studies were an excellent learning experience. • Yes – visits were very informative. • Yes, very good visit and well organised. Compliments. • The field visits were very insightful and provided a pertinent basis for discussions during the following day. They were very well organised and conveyed interesting and practical aspects on CIR.

- Excellent visits, well-coordinated and appropriate to the conference.
- Met my expectations.
- Visits were excellent and very informative.

2. Venues

- All venues were well suited for the activities.
- Venues were excellent – the refinery gave us access to something rarely seen, and made real so many ideas we are discussing. The MART and Control Room gave a real sense of partnership in practice (minute by minute action).
- The Grangemouth-visit could have been more about the safety and security activities. Now it was “just another refinery”.
- The visit to the Traffic Scotland National Control Centre was very interesting.
- Excellent.
- Venues were fine.
- Yes, very good.
- The venues, food and organisation at the venue were excellent.
- Excellent venues, good facilities.
- Met my expectations.
- Venues were excellent throughout.