



Magnox



Driving on Company Business Learning from Experience

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Magnox Sites

Magnox Ltd is a nuclear site licence company employing ~ 3500 people.

Responsible for the safe delivery of programmes of work across ten nuclear sites spread across England, Wales and Scotland – mostly remote locations.

Our operations include electricity generation, spent fuel management, decommissioning and waste management.

Energy Solutions manages these sites under contract to the Nuclear Decommissioning Authority.



Our Approach to Safety Management

- Highly regulated environment (ONR, EA / SEPA)
- Process background; now more project orientated
- Strong focus on compliance
- Human performance programme in place
- Well established and highly visible safety culture
- Not complacent, nor perfect
- (Continuous) improvement planning process

Our Health and Safety Record – 12 Months to December 2011

- OSHA Days Away Case Rate (DACR) 0.18
- OSHA Total Recordable Incident Rate (TRIR) 0.31
- RIDDOR Dangerous Occurrences 2
- Sickness Absence (person.days – total) 4.38

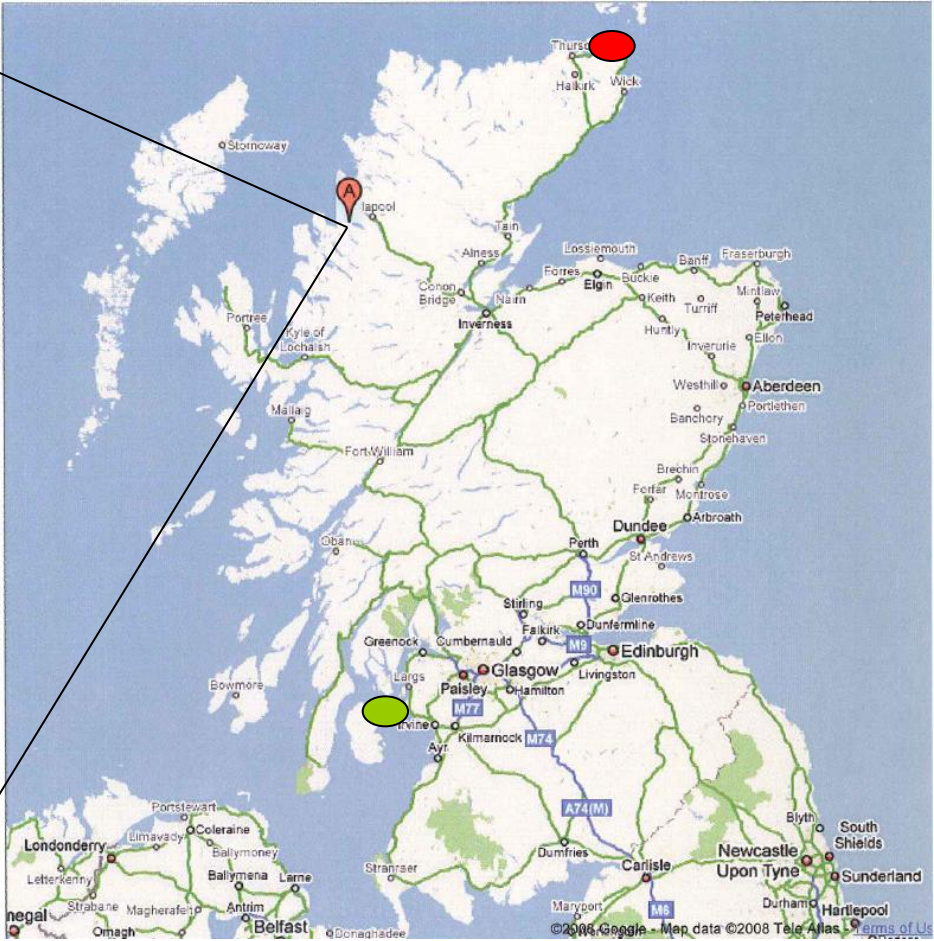
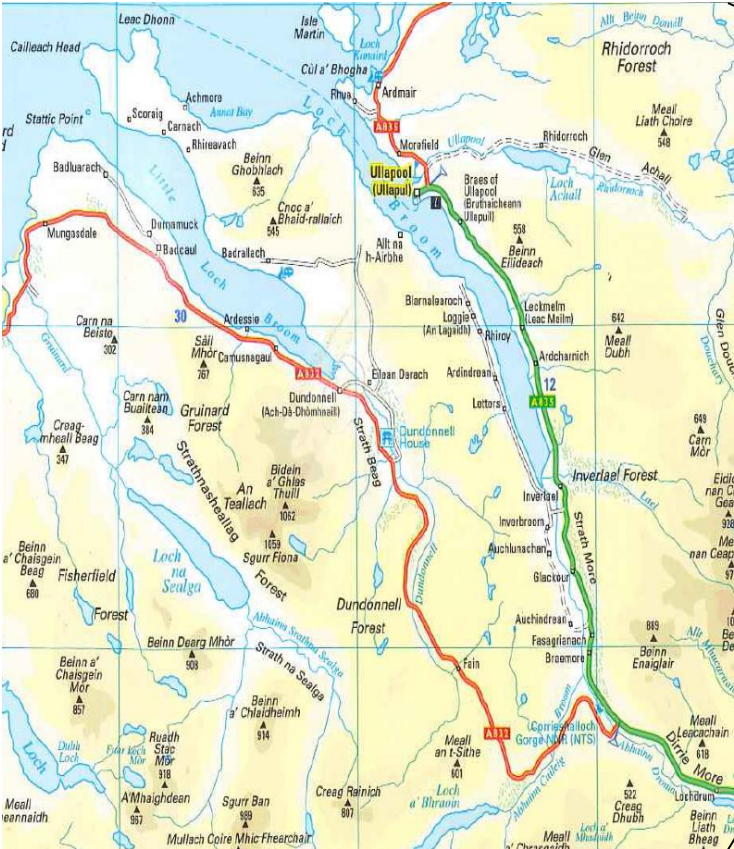
Driving on Company Business

- Geographical spread of sites and multi-site nature of business necessitates a certain amount of travel for some staff
- Management arrangements in place for some time
- Monitoring events, few near misses but no injuries
- Awareness of need to review arrangements, work underway across the business

Trigger Event – June 2008

- Employee killed in Road Traffic Accident
 - Travelling from Hunterston to Dounreay on business
 - Travelling by motorbike
 - Road and weather conditions good
 - Collided with a car
 - Car driver was at fault

Location

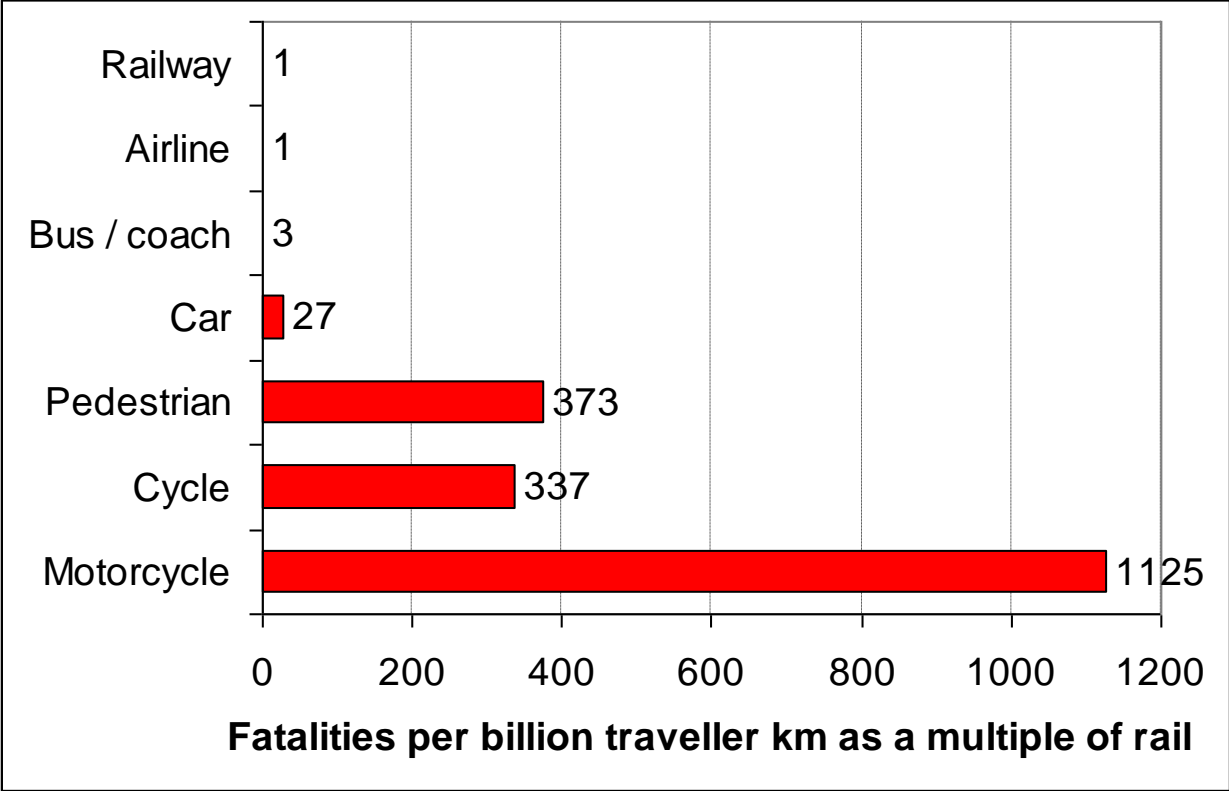


Immediate Response

- Support to family and work colleagues
- Board of Inquiry established
- All manager 'Stand Down' led by Managing Director

- Temporary ban on (business) travel by motorbike ...

Relative Risk with Different Modes of Transport



Inquiry Findings - 1

- Existing guidance broadly robust, included layers of defence and a systematic risk assessment process
- If guidance followed fully, chosen travel arrangements may not have been implemented
- Specifically
 - Mode of transport, not banned but discouraged
 - Route taken, minor roads not more direct major roads
 - Distance involved and travel time

Inquiry Findings - 2

- Whilst guidance broadly robust:
 - Some areas needed to be strengthened
 - Some ambiguity required addressing
 - Document status required elevating
 - Better communicate the relative level of risk compared to other work activities

Actions Taken – Arrangements

- Guidance rewritten and issued as stand alone Standard
 - Based on HSE guidance; Independently reviewed by IAM
- Mandatory / guidance sections
- Risk assessment process highlighted and strengthened
 - The driver; The vehicle; The journey
- Travel decision process flow chart introduced
 - Challenges need to travel, the means and the number travelling
- Authorisation
 - Frequent and Occasional Driver approach adopted
- Security and Safety enhanced

Actions Taken – Training

- Training requirements clarified
- Minimum standards set:
 - All staff required to drive given awareness training – classroom based
 - Over 2000 miles / year - on road driver training every 3 years
 - 10, 000 – 20, 000 - on road driver training every 2 years *
 - More than 20, 000 - on road driver training every year *
- * Positive actions taken to reduce mileage to < 10,000

Actions Taken – Monitoring

- KPIs established to monitor business mileage
 - All miles recorded
 - Line managers required to review miles driven and take actions as appropriate
 - Miles travelled by public transport and car share also recorded (environmental benefit)
- Annual AIMs set to for business mileage
 - Monitored by Exec
 - Reported to the Board

Actions Taken – Audit and Review

- Guidance critically reviewed and revised
 - After six months experience
- Audit against revised arrangements undertaken
 - At all locations
 - Action close out monitored carefully
- Recently undertaken a follow-up review ...

Changing Behaviours

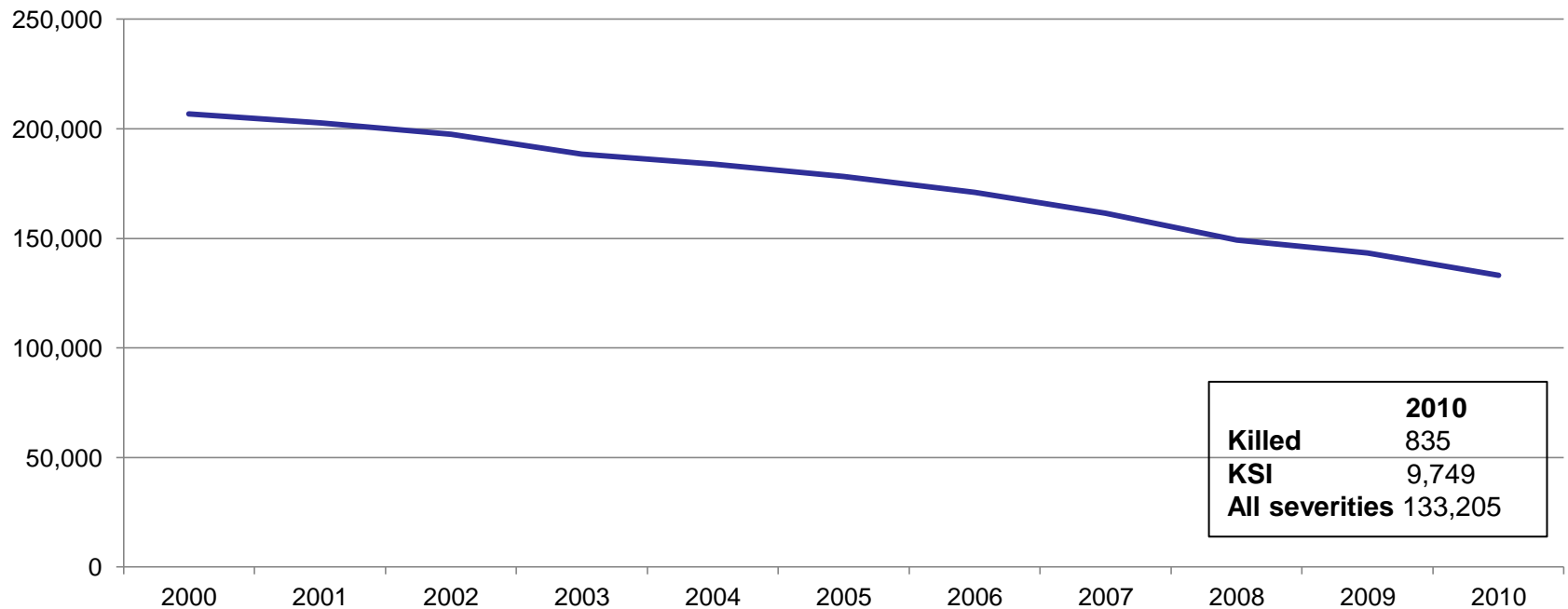
- Greater use of telephone and video conferencing
 - Invested in video conference equipment upgrades
 - Investing in and promoting web conferencing
- Greater use of public transport encouraged
 - Rail cards purchased for those staff who qualify
- Established taxi contracts to enable better site links with train stations / airports but ...
- Where road journey can not be avoided then car share
- Executive Team challenged leading by example

Has it worked ?

- Heightened focus
- Behaviours have changed
- Year by year reduction in mileage
 - 2009/10 down ~30% (20% target)
 - 2010/11 down ~10% (5% target)
 - 2011/12 down ~20% (0% target)
- Better understanding overall business risk ...

Reported road accident casualties: Car drivers and passengers 2000-2010 (DfT Stats)

All Severities (inc Killed and Seriously Injured)



Reported casualty rate per billion vehicle miles by region, road user type, England, 2010 (DfT)

	Pedal <u>cycle</u>	Motor <u>cycle</u>	<u>Car</u>	<u>Bus</u>	Light <u>goods</u>	<u>HGV</u>	Rate per billion vehicle miles <u>All¹</u>
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North East	5,073	6,130	551	2,636	143	105	675
North West	6,479	6,875	592	2,286	104	82	712
Yorkshire and the Humber	4,957	6,716	660	2,751	115	101	764
East Midlands	4,832	6,758	576	1,944	125	83	655
West Midlands	4,901	6,065	552	1,234	118	82	626
East of England	3,400	5,876	500	869	98	95	567
London	10,211	9,548	839	3,654	207	131	1,450
South East	5,024	5,825	483	1,844	95	105	581
South West	5,350	4,711	470	1,144	82	94	567
England	5,638	6,610	561	2,072	113	94	694

Magnox 'Risk'

- Estimated 4 million miles driven on business
- Double chance of a severe injury every year
 - $4 \times 561/1000 = \sim 2$
- Compliance with Standard reduces this risk
 - Training shown to reduce risk to $\sim 60\%$ (1.2)
- Reduction in mileage reduces risk further
 - $50\% = 0.6$
- Chance of a serious injury every other year
- Overall reduction in risk of factor 4

Summary

- Positive response to a tragic accident
- Challenge addressed on a number of fronts
- Benefits beyond workplace
- Sad but important story of learning from experience
- Sober reminder - better to be in the 'what if' area of concern than in the 'if only' area of regret