Mines Sector Health and Safety Strategy

2011 to 2013

1. Strategic context

Scope

1. This sector strategy covers the health and safety system applicable to underground:

- coal mines
- mines producing other minerals
- tourist mines and mines used for adventure activities
- storage mines

2. The range of major and other hazards in underground mines in the Great Britain is no different from mines elsewhere. Worldwide there is a mining disaster almost every week from explosion, fire, flood or collapse. Recent high profile events include the November 2010 Pike River Mine explosion in New Zealand which killed 29 miners and the 33 miners trapped below ground in a mine in Chile. Lower profile tragic incidents regularly occur. For example 30 miners were killed in an explosion in China during the Chilean episode but did not attract the same attention. There is still a potential for catastrophic mining accidents in Great Britain and reducing the likelihood of such incidents aligns with the strategy goal of avoiding catastrophe.

3. The coal sector has a continuing strategic value to the country as deep mines produce about 15% of the coal burned in Britain's thermal power stations. Energy generators, steel producers and a number of other energy intensive industries are dependant on domestically produced coal.

4. The rock salt sector is significant as it plays a major role in keeping open Britain's road transport arteries during the winter months and the maintenance of sufficient production and stocks is important to the British economy. British potash production underpins a large part of European agricultural fertiliser manufacture. Domestically produced gypsum is important to Britain's construction sector, and barytes production supports a number of other energy industries, being an important constituent of drilling mud for oil and gas wells and an ingredient in the heavy concrete used for radiation shielding.

Description

5. The mining sector is small and relatively isolated from other sectors comprising around 100 mainly small and medium sized mines. Only five mine owners employ more than 500 people and four of these are part of larger companies whose deep mining interests are not the dominant part of their businesses. HSE data derived from a number of sources indicate that the sector employs no more than 6,000 people.

6. Coal Authority statistics indicate that coal mines employ about 3,500 mine workers and produce 7-8 million tonnes per annum from seven large mines and about 20 smaller mines. The remaining large coal mines are in Yorkshire, Nottinghamshire, Warwickshire and South Wales. Most small coal mines are in South Wales and the Forest of Dean. Coal industry regulation and structures were set up to deal with a large nationalised industry and adjusting to the much smaller sector size is a continuing issue.

7. Non-coal mines are, geographically, more evenly spread and there is a small number of large mines. Britain's largest, deepest, and highest output mine is a potash and rock salt mine employing over 700 below ground. One company operates a group of five gypsum mines and there is also another large rock salt mine.

8. The mining sector is no longer large enough to support a supply chain of specialist equipment and materials manufacturers. Even though there remain a few British mining equipment manufacturers their main business is overseas and Great Britain operators are faced with fewer and fewer choices. This can cause difficulties with equipment availability and standards.

9. There are also around 40 mines used for tourism, storage, training and adventure activities.

Employment and employment trends

10. At most coal mines the workforce is established, ageing and almost exclusively male. Whilst coal mining jobs are relatively well-paid and secure compared to other manual occupations, coal mining is seen by many as a dirty, dangerous and unattractive job. Some coal mine operators have turned to foreign workers from within the European Union (EU), mainly Polish miners, many of whom speak little or no English when they arrive. At one or two mines they make up more than 10% of the workforce below ground.

11. Sustained contraction over the past 30 years means that the sector no longer has the critical mass to offer attractive graduate careers. The range of training providers has shrunk and in some cases disappeared. Many experienced managers, engineers, supervisors and mine surveyors have left the industry and the replacement pool is very small.

12. Non-coal mines generally have a higher employee turnover and a more even age spread.

Regulation

13. There are four main regulatory bodies within the sector. HSE regulates health, safety and welfare; the Environment Agency (EA) / Scottish Environment Protection Agency (SEPA) regulates environmental issues, including certain hazardous mining wastes and the issue of emissions and discharge permits; the Coal Authority (CA) licenses coal mines; and Local Authorities (LA) deal with both development planning and mineral planning issues.

14. In addition to legislation of general application there is a large body of mining specific legislation, some of which dates from the 1950s. Coal mines are subject to more regulation than non-coal mines due to the greater likelihood of flammable atmospheres and fire propagation. Some mining legislation was renewed in the 1980s and 1990s but the programme was discontinued as the Health and Safety Commission took the view that renewal of legislation for the small and diminishing sector was not a priority.

15. Older mining legislation is largely prescriptive and still requires mine owners and managers to variously notify HSE, seek consent, approval or direction to permit certain activities, or to seek exemptions where safer, modern working practices have overtaken the regulatory constraints. In some isolated but important areas HSE does not have the power to grant exemptions sought by operators. This can create operational difficulties which do not add anything to worker protection.

16. There are a number of EU Directives relating to the extractive industries, which are largely implemented through existing legislation. While health and safety legislation relating to Great Britain mines and quarries implements the health and safety provisions of the Mining Wastes Directive, EA and SEPA are currently implementing the environmental and emergency planning issues.

17. There is no recognised European or international standard for the testing and approval of mining explosives for use in potentially flammable atmospheres. Under current legislation all such explosives must be approved by HSE which also commits to the check testing of samples of explosives at periodic intervals. However Britain's only test facility at HSL, Buxton, has been out of commission for several years. It is likely therefore in the short to medium term that mines with potentially explosive atmospheres will have to rely increasingly on exemptions based on the results of other national ignition and safety tests.

18. The Mines Unit of HSE's Hazardous Installations Directorate (HID) regulates health and safety in the underground mines sector across Great Britain. It comprises six mining engineering specialist inspectors, three mines mechanical engineering specialist inspectors, and three mine electrical engineering special inspectors. They are led by a Chief Inspector, who is a mining engineer. All inspectors have years of experience in senior management positions at large coal mines. There is a shared administrative support team.

19. The Unit's mining mechanical and electrical engineering specialist inspectors also regulate cableways. The equipment and operational

principles of cableways are similar to some mines transport systems but the regulatory framework is different.

Intermediaries and other influencers

20. The key intermediaries are the people within the various sub-sectors: employers/mine owners; employees and their trades unions; manufacturers; producer and manufacturer representative organisations; Other Government Departments and Non-Departmental Government Organisations; and the EU and other European bodies

21. HSE has regular contact with individual employers and mine owners through its regulatory activities. The coal producers among them participate in the trade association CoalPro. Both individual operators and CoalPro have regular meetings with Department of Energy and Climate Change (DECC). These meetings generally relate to the economic and financial climate within the sector.

22. Most non-coal mine operators belong to their own trade association, the Mining Association of the United Kingdom (MAUK). Rock salt producers have regular contact with Department for Transport (DfT) , which has recently instructed local highways authorities to increase significantly their stocks of road salt and wants the producers to increase output.

23. HSE chaired and played a large part in directing, presenting and leading the Mining Industry Committee (MIC). This tripartite body dealt with health, safety and welfare issues in the mines sector but its remit expired in September 2010. HSE is working with key stakeholders to develop a tripartite successor to the MIC which is industry led and aligned to this mines sector strategy.

24. The mining workforce is still highly unionised. In the coal sector the National Union of Mineworkers (NUM) and The Union of Democratic Mineworkers (UDM) represent the majority of the industrial workers and there are other, smaller, mining-based trades unions representing supervisors and managers.

25. In the non-coal sector Unite and GMB have the biggest representation and also have some presence in coal mining. However mining employees represent only a tiny proportion of their total memberships.

26. The Unit has regular contact and exchanges information with The Coal Authority, principally in relation to licensing issues, pumping mines and remedial works in abandoned coal mines. EA/SEPA license emissions and discharges from mine surfaces and tips. The Mines Unit is currently supporting EA/SEPA and LAs on the implementation of the Mining Wastes Directive.

27. The EU will continue to exert an influence. A current proposal for member states to reduce Nitrogen Oxide (NOx) exposure limits by a factor of 10 would make it extremely difficult for mines to continue using diesel engines or explosives below ground.

28. The Heads of European State Mining Authorities Conference meets once per year. It is independent of the EU Commission and has on occasions successfully lobbied the Commission where emerging proposals could have a significant adverse effect on mining industries. It is currently lobbying on the NOx exposure limit issue.

29. There is also an EU Standing Working Party (SWP) for the Mining and Other Extractive Industries which scrutinises and advises the European Commission on emerging proposals. This is a sub-group of the main EU safety and health committee, and so is part of the Commission's formal advisory structures. Its principal function is to give advice in relation to health, safety and environmental issues, including commenting on discussion documents and draft policy proposals. Through its involvement HSE has repeatedly advocated goal setting rather than prescriptive policies and has sought to ensure that policy proposals achieve safety objectives whilst minimising negative effects on British businesses. The UK has been represented by a government (HSE) and employer representative since the formation of the SWP.

Production and Service Trends

30. It is unlikely that employee numbers will change much in the coal sector over the period covered by the strategy but the industry remains vulnerable. The mining technologies and techniques are generally well established and have evolved over many years. It is unlikely that there will be any significant technological innovation within the sector during the life of the strategy.

31. The number of mines used for storage, controlled waste disposal and other purposes is increasing slowly. Most of these businesses are located in former stone mines but the largest is in a working salt mine. A significant proportion of the National Archive is stored in specially engineered vaults in part of a working salt mine in Cheshire. The storage of large quantities of flammable materials, such as documents, below ground gives rise to underground fire risks that need to be carefully controlled. The potential for off site risk is small. In another part of the same mine a special wastes disposal facility enables the safe and controlled environmental disposal of wastes from high-tech industries.

32. HSE's records indicate that the tourist and adventure activities mines sector includes nearly 40 mines and is increasing slowly. It is difficult to estimate precisely annual visitor numbers to tourist mines but it is likely to be well in excess of one million.

33. The number of mines rescue service stations is likely to remain at six in the short to medium term. Mines Rescue Service Limited (MRSL) is a private emergency service employing some 60 rescue officers and rescue workers whose principal purpose is to rescue people from irrespirable atmospheres. It is funded in part by a levy on coal production but also increasingly by income from other sources. Their specialist expertise is often called on during emergencies outside the mining sector; for example, they played a big role following the ICL factory explosion in Glasgow. While MRSL does not in itself

Summary of strategic issues

The mining industry:

- Has a coal sector which has shrunk to a fraction of its former size;
- Has few relatively few employees in comparison with other industry sectors (c.6000);
- Includes a diverse range of operations and functions from deep coal to tourist mines;
- Has a complex and, in places, dated regulatory background. For example, HSE is integral to the granting of consents, approvals and exemptions etc for normal operation;
- Has complex stakeholder relationships;
- Has stable employment levels but the diversity of the use of deep mines for other purposes is predicted to increase steadily; and
- Has experienced a significant influx of foreign workers.

2. Health and safety issues

Work-related safety issues

34. Major hazards issues clearly predominate with the main concerns being fire, explosion, inrushes, major rock falls, transport through shafts and mass transport below ground. The major hazard risks are largely confined to the premises and there is little potential for off site effects. The actions taken following the 1966 Aberfan disaster have largely eliminated the off site safety risks from mine spoil heaps and other mines waste disposal facilities.

35. There were ten fatal accidents in mines between 2006 and 2009, eight of them in large coal mines, following a period of only one fatal accident in six years. HSE's investigations indicate that many fatal and major injury accidents in the past few years can be traced back to deficiencies in the implementation of safety management systems and a lack of effective safety leadership.

36. Underground mine fires have the potential to affect large parts of a mine and put significant numbers of those underground at risk. The incidence of mine fires has increased in recent years, increasing the risk of endangering large numbers of workers. The industry needs to make significant improvements in the management of this critical risk.

37. The contraction within the coal sector has resulted in a loss of corporate memory as many experienced leaders left the industry. Improving leadership, developing and reinforcing competencies, and safety performance measurement are key objectives within the sector.

38. Competence development at all levels is a major issue. Suitable training courses which are specific to mining related disciplines have all but disappeared, but the sector has started to take steps to redress the balance and is working with a wide number of funding providers and accreditation bodies to develop a range of NVQs and other training opportunities. The modular nature of these qualifications means that they can be adapted to meet the needs of most mines.

39. Basic training of mining professionals is also a concern as there remain very few higher educational institutes providing mining-related training, and those that do are not specifically geared to meeting the particular needs of the deep coal mine employers. The dated regulations require the holders of certain coal mines posts to hold certificates which have been issued by HSE.

40. The influx of foreign workers has created additional training, supervision and management challenges. For example: translating key risk control procedures into the native language; ensuring that there is at least one reasonably fluent English speaker in each group of workers; and taking additional steps to ensure that verbal instructions are understood.

41. The relatively low numbers of major injury accidents in this small sector makes analysis difficult. Few mines have a near miss reporting system that is well-resourced so there is no large body of data that might enable trend analysis.

42. Statutory provisions require mines to observe, measure, and record a great deal of health and safety related information. Although there are some exceptions, overall the sector is fairly poor at analysing this data. It is also poor at identifying other major hazard safety performance measures and therefore it is generally poor at analysing its own safety performance.

43. The sector is generally good at resourcing safety representatives to undertake safety inspections and in running events such as safety days. Safety inspections tend to focus much more on the work environment than work processes and there would be benefits from ensuring that safety representatives were able to assess underlying safety management issues. The safety inspection system is relatively detached from other health and safety management processes. The sector therefore does less well in reacting to issues raised during safety inspections.

44. Ageing infrastructure on critical items of plant such as winding systems require close attention to maintenance management and are priority areas under ‘Avoiding Catastrophe’ within the strategy.

45. Large mines may work up to 10km from the shafts and those mines need to be well prepared in the event of an emergency situation. Well defined escape and rescue strategies must be in place, backed up by a viable mines rescue service.

46. Work-related safety issues arise from the short term effects of working in hot and humid conditions, such as the risk of heat exhaustion and heat stroke. Operators of mines with hot and humid conditions are generally good at acclimatising workers, giving dietary advice, providing chilled drinking water, and providing medical surveillance. They are less good at considering how temperature and humidity might be reduced. As this is likely to involve a

fundamental shift in approach to the design of mine layouts any action is necessarily medium to long term.

47. In tourist mines the principal risks are to members of the public and arise from transport through vertical shafts and mass transport below ground on cableways and trains.

Work-related ill health issues

48. The occupational health of mine workers continues to be an important issue. Working conditions in mines have improved greatly over the years but mineworkers can still be exposed to a range of hazardous dusts, gases and other substances. Information from the state compensation scheme for occupational respiratory diseases among mine workers shows that prevalence rates have fallen but due to the long latency period new cases are still being diagnosed, mainly among retired mine workers who are beyond the scope of this strategy.

49. Legislation introduced in 2007 tightened the controls on exposure to inhalable dusts in coal mines and should bear down further on the prevalence of coal miners' pneumoconiosis in the long term. The adequate control of exposure to coal dust and respirable crystalline silica will remain a priority for the coal sector.

50. Other current issues centre around Musculo Skeletal Disorders (MSD), exposure to hazardous substances (CO, NOx and diesel particulates), and uncertainties around the long-term effects of working in hot and humid conditions.

51. Exposure limits are likely to continue to be reduced over time and this will require the sector to introduce increasingly tighter controls. If Britain adopts the recommendation from the EU's Standing Committee on Occupational Exposure Limits (SCOEL) to reduce the NO_2 exposure limit by a factor of 10 (to 0.2mg/m^3) the continued use of diesel engines in mines may not be possible. Engineering controls on diesel exhaust emissions and dust from mineral cutting machines have probably reached the limit of what is practicable. However it is possible that further reductions in exposures might be achieved by adjusting working practices.

52. The reduction in exposure limits will in some cases present a challenge for exposure measurement technologies for other industries as well as mines.

53. MSDs arising from the use of vibrating equipment are generally well understood and the sector deals with them well. Vibrating equipment is eliminated where possible and health surveillance has identified people at higher risk. Deployment procedures ensure that those workers do not use such equipment.

54. Whole Body Vibration affects far fewer people and newer rubber tyred vehicles are much better ergonomically than older models.

55. Osteoarthritis of the knee in coal miners has recently become a prescribed industrial disease. This is largely a legacy issue although the potential still exists for new cases. It is not a sector priority.

56. Exposure measurement and medical surveillance within the sector is generally very good at larger mines, and appropriate to the health risks at most smaller mines. This driven in part by statutory requirements but also recognition among larger employers that many mining jobs are physically challenging

Summary of health and safety issues

- Potential for catastrophic incident through fire, explosion, flood, collapse, etc;
- Loss of knowledge at leadership level of the hazards and risks of the industry;
- Absence of data and metrics for monitoring major hazard safety performance (leading and lagging indicators);
- Ageing infrastructure (e.g. winding systems);
- Challenging work environment;
- Maintenance of effective emergency arrangements, including the constant availability of a mines rescue service ;
- Occupational health risks, particularly long latency respirable disease risks arising from exposure to harmful dusts and gases;
- Possible further reductions in work exposure limits for respirable crystalline silica and NO_2; and
- Additional challenges posed by non-English speakers

3. Strategy goals

The following aims and objectives have been devised to address the issues highlighted in this sector strategy and will contribute towards delivering the Health and Safety Strategy for Great Britain. They cover the particular strategic goals of: Leadership; Involving the Workforce; Avoiding Catastrophe; Building Competence; and Creating Safer, Healthier Workplaces.

Strategy Goal: Leadership

Aim 1

Recognising the value of health and safety leadership is vital and that demonstrating this is what will make the difference to the industry. Senior mining company executives are the sector leaders that will set the safety culture of any organisation. The distinction between leaders and managers is clear (leaders set direction and managers facilitate the journey), yet both roles have to be able to engage the workforce. Effective Health and Safety leadership will be achieved through demonstrated, authentic leadership behaviours.

Objectives

- Sector leaders lead by example. This means setting the standard and being what they want others to become. They set the safety culture and identifiable behaviours and do not turn a blind eye to poor behaviours and standards that increase the likelihood of major incidents or hazards.
- Identify appropriate training and development strategies to provide effective leadership at all key levels within the management structure.
- Sector leaders set realistic and measurable targets for themselves to attend and actively participate in mine health and safety committee meetings.
- Sector leaders set targets for those in senior management posts at mines to carry out health and safety over inspections, and monitor performance.

Strategy Goal: Involving the workforce

Aim 2

Mine operators will work effectively with their staff to tackle major hazard and other health and safety issues within their organisations

Objectives

- Leaders within companies and unions regularly and constructively engage all staff at all levels to establish a shared perspective of the health and safety priorities and agree how best to address them;

- Managers, supervisors and workforce safety representatives receive additional training as appropriate to enable them to work together more effectively to identify, communicate and deal with hazard/risk issues, including determining the root causes of significant incidents and near misses;
- The sector recasts safety representatives' inspections to focus equally on work processes (safe/unsafe acts observations) and the working environment;
- All safety representatives at mines work constructively together during safety inspections to improve their quality and effect
- Senior managers at mines give visible support to the health and safety representatives' inspection regimes
- Systems are in place to:
- close out issues raised during safety inspections, management over-inspections, and near miss reports
- facilitate raising of potential health and safety concerns by staff
- identify issues of wider significance

Activities for delivery

- Most of these issues are covered within the 'Avoiding Catastrophe' and 'Need for Strong Leadership' interventions
- Intervention plans include accompanying safety representatives on a safety inspection and attending a safety committee meeting at each mine
- Intervention plans include looking at Safety Management Systems to see how issues raised in various inspection and reporting regimes are closed out and how key health and safety information is communicated at the mine and beyond

Strategy goal: avoiding catastrophe

Aim 3

Mine operators understand fully the range of major hazards at their mines and have in place procedures to ensure the risks from these hazards are properly controlled.

Objectives

- Senior managers and executives assess their companies against HSE's leadership framework, identify areas for improvement, and develop and implement strategies and plans to address these areas;
- The coal sector reduces the number of mine fires to zero by 2013;
- The non-coal sector reduces the incidence of high potential fires to zero by 2013;
- The sector demonstrates that it has in place appropriate procedures for identifying specific risks that may arise from ageing structures and

equipment such as shafts and winding systems, and other structures whose collapse could result in multiple fatalities;

Aim 4

Mine operators have in place suitable arrangements for measuring and benchmarking their safety performance

Objectives:

- The sector identifies and makes use of appropriate major hazard safety performance measures and improves its analysis of the health and safety data it collects;
- The sector reviews and improves its mechanisms for sharing good and best practice and learning from incidents, including reviewing the arrangements and aims for a cross industry leadership group (previously the Mining Industry Committee), its sub-committees, and other sector groups;

Aim 5

The sector has in place an appropriate regulatory framework.

Objectives

- Mining legislation is reviewed and, where necessary, amended to ensure it is suitable for the modern working environment and does not obstruct the adoption of safer working methods

Activities for delivery

- Operators of larger coal mines will review the causes of conveyor belt fires and ensure that engineering and maintenance standards are sufficient to achieve the planned reduction in the incidence of fire
- Operators of other mines with diesel vehicles will review the causes of vehicle fires and ensure that engineering and maintenance standards are sufficient to achieve the planned reduction in high potential fires
- Mine operators will review their arrangements for managing risks to the structural integrity of winding systems and other major surface structures
- Mine operators will take steps to identify and prioritise key major hazard safety performance indicators and ensure that adequate arrangements are in place to identify trends and take appropriate preventative action when necessary
- Mine operators will ensure that adequately resourced near-miss reporting arrangements are in place by April 2012;
- All intermediaries come together to review the purpose, membership and chairmanship of the Mining Industry Committee, its workplan, sub-

committees and other sector groups to determine the successor arrangements.
- HSE will lead a sector review of older mining legislation, involving representatives from industry and workers, to assess the nature and scale of any changes that may be necessary
- Workforce representatives will work together and co-operate constructively with mine owners and managers in taking forward initiatives designed to improve health and safety performance, particularly in relation to avoiding catastrophe
- HSE will work with industry in assessing the leadership framework at company and at mine level
- HSE will maintain and develop hazard and risk based intervention strategy which will include intervention plans for higher hazard mines identified by the unit's inherent structural hazard/risk rating system.
- HSE will assess consents, approvals, directions and exemption applications, prioritising the degree of assessment to the risk
- HSE will investigate accidents, incidents and complaints in accordance with HSE & Divisional arrangements
- The mining sector will commission research and arrange for scientific and technical support where necessary to support this strategy

Strategy Goal: Building Competence

Aim 6

Employees at all levels are developed to appropriate levels of competence with respect to the tasks they undertake and their responsibilities for health and safety risk control within the sector

Objectives

- Leaders within mine operating companies will assess their companies against HSE's competence management framework to identify safety-critical posts, determine key competencies for those posts, prioritise areas for improvement, and implement training, instruction and mentoring programmes as appropriate;
- The mining sector will continue to work together to develop and implement programmes designed to reinforce the health and safety competencies of employees (linked to the 'Involving the Workforce' Strategic Goal);

Activities for delivery

- Mine operators will ensure that arrangements are in place for managerial and supervising staff at all levels to further develop the knowledge and competence required to effectively implement safety management systems and to demonstrate effective safety leadership;
- The mining sector will continue to progress work with a range of training providers to develop a range of NVQs and other training

opportunities that include health and safety requirements in competencies for mine workers.
- Through participation in industry forums sector representatives will facilitate the sharing of good practice in health and safety competence management and approaches to upskilling
- HSE will undertake a programme of interventions to assess the effectiveness of the competence management system for safety-critical posts at company and mine level.

Strategy Goal: Creating Healthier, Safer Workplaces

Aim 7

The mining sector will effectively manage key health issues.

Objectives

- The sector identifies steps that might be taken to reduce exposure to excessive heat and humidity and develops a plan for implementing effective measures.
- Mine operators continue to determine where it is practicable to take further steps to eliminate or reduce exposure to potentially hazardous dusts, gases and other substances, and vibrating equipment. This should include looking outside the sector and working with equipment manufacturers (link to Strategy Goal; Taking a wider perspective).

Activities for delivery

- Operators of hot and humid mines will identify how, in the short to medium term, working practices might be changed to reduce exposure to high temperature and humidity, and consider how in the long term mines might be planned to reduce temperature and humidity. Operators will assess the effect of longer working shifts on the health of workers.
- Operator-specific, work-related health interventions are programmed to cover the various objectives
- HSE will investigate newly diagnosed pneumoconiosis cases notified under RIDDOR.

Strategy goal: Taking a wider perspective

Aim 8

The sector engages with the wider health and safety community

Objectives

- Ensure joined up working with EA and SEPA in relation to new requirements relating to mines waste facilities
- Look at mining operations overseas and look at other sectors to identify relevant good risk control practices
- Understand the causes of major mining accidents worldwide

Activities for delivery

- HSE will work with EA and SEPA to ensure a smooth implementation of the new requirements relating to mines waste facilities

4. Ways to achieve the aims and objectives

These aims and objectives have been developed in discussions at tripartite meetings between industry, trades union representatives and HSE. Whilst some of the objectives, such as the proposed review of older mining legislation, are clearly for HSE to lead on, the majority will fall to the mining sector. The disposition of the sector, which has only a few large operators, and relatively small trades unions, is such that larger operators will be best placed to lead on matters that fall principally to the sector. We expect trades unions to co-operate and to play their part by making constructive contributions and encouraging their members to engage with the health and safety issues affecting their mines.

In addition to delivering core regulatory functions the Mines Unit's priorities are designed to support improved health and safety performance in the sector and we will to engage with employers and workers in developing the mines sector intervention strategy.

The mining industry safety leadership group will become the main forum for engagement within the sector and will be a more strategic successor to the Mining Industry Committee. Though the group will be industry led HSE will support the development of the successor which should become established during the first year of the strategy. The group will review the roles of other committees and working groups within the industry to ensure that they are focussed on contributing to the strategy.

Leadership, competence and safety performance measurement will be rolled into a two stage intervention process, with a small team carrying out high-level interventions with the larger mine operators. Allocated inspection teams will undertake mine level interventions once the outcomes of the first stage have

been analysed and disseminated. A matrix based on the PLSG8/HID model will be used to support the process. The first stage will be to invite duty holders to self-assess against the matrix.

Major hazard and other key topic interventions at mines will generally combine both audit type and on site verification type approaches. A snapshot of leadership and competence issues in relation to the major hazard risk control under consideration will feature in all of these interventions.

5. Roles and skills

These are set out to some extent in the 'Strategy Goals' section. A programme of stakeholder engagement meetings is currently underway as a first step towards defining the resources and skills required to deliver various objectives, and identifying organisations and/or individuals to take the lead.

The diverse range of hazards and risks in much of the sector means that those running and regulating the industry need high levels of experience and professional expertise.

6. Potential for success/impact and rationale

Whilst we are still at an early stage in rolling out the strategy there is already begun to see some movement within the sector. One large mining company has changed its corporate structure and appointed a mining engineer as executive director to take a stronger lead of the mining division. This was an early outcome from the company assessing itself against an early draft of the leadership framework.

The enthusiasm of a number of parties for meetings to talk about the three year strategy is also encouraging. There is already a high level of stakeholder engagement within the sector but this approach should cause people to think about what the sector needs to achieve, not only over the period of this strategy but in the longer term. There is some evidence that some of the more forward looking operators are already thinking in these terms and are doing more to engage their employees proactively. If this trend continues there is every chance that the strategy will succeed.

7. Political/Societal issues, mandatory work and statutory functions

Most priority activities within the strategy are directly related to the goals within the Strategy for Health and Safety. The following HSE activities do not readily relate to a strategy goal but are nevertheless considered a priority.

Statutory functions

- Make provision for the storage of abandoned mine plans and access to the information contained on them.

- Approve statutory mining qualifications and issue certificates in accordance with approved criteria.

Advice and support to Other Government Departments and Europe

- Participate in the European Commission's Standing Working Party for Mining and Other Extractive Industries to monitor regulatory and other developments that might affect the mining sector and ensure that safety objectives are achieved without placing British mining at a disadvantage.
- Participate in the Heads of European State Mining Authorities Group to identify issues of joint interest and to make representations to the Commission where necessary.
- Provide intervention and technical support (under a fees for service agreement) to the Health and Safety Executive for Northern Ireland in relation to mining and related activities.