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<b>Government Response to the Gill Report</b>			

### Purpose of the paper

1. To agree HSE advice to Government on the response to the recommendations made in Lord Gill's Inquiry report into the ICL Plastics Ltd explosion.

### Background

2. The ICL Plastics Ltd explosion was a tragic and avoidable event. The Board has recognised the sensitivity of the issues and has taken regular reports and given direction to the HSE response over many months. At previous meetings, and in other fora, the Board, Chief Executive and Chair have apologised for HSE's failings in ensuring that ICL dealt effectively with the LPG risk prior to the disaster. Furthermore, the Board has affirmed over many meetings, the need to take determined and committed action to learn the lessons from this tragic event and ensure the safe use of LPG at small bulk installations to reduce the likelihood of a similar event occurring.
3. The Board has noted previously that HSE has made significant improvements to its internal management processes since the time of the events leading up to the explosion, all of which are designed to ensure that matters of concern are consistently pursued to a resolution by inspectors and then documented to provide an adequate record of the intervention.
4. The focus of this paper is the response to the Gill report. Ministers have indicated that they intend to give the final Government response to Lord Gill's recommendations in March and this paper provides a basis for advising the Minister on that response.

### Argument

5. The Gill report contained a series of recommendations to improve the safe use of LPG, a central element of which is the proposal to establish a new safety regime for small bulk LPG installations. The report also contained recommendations of a more general nature in relation to the independent audit of workplace risk assessments and for guidance on building safety where LPG is in use.
6. The recommendations were laid out in a four-phase action plan and we are pleased to report that we are already taking forward many of them, summarised at Annex 1. In particular, HSE have put considerable time, effort and resource into working with the LPG supply industry to develop a pipework replacement programme and parallel inspection campaign. This is critical in helping to reduce significantly the risk at small bulk LPG installations.

7. Following Lord Gill's recommendation for a new safety regime, we consulted stakeholders to seek their views and opinions of the proposals and how we can improve safety at small bulk LPG installations. A summary of the 60 responses received is given at Annex 2. Strongest support was given to specific elements of the regime such as the production and maintenance of an installation record, a supplier asset record and a register of suppliers. Stakeholders were more mixed in their response to the proposed formal verification scheme with 34% in support, 34% opposed and the rest not expressing a clear view. In addition, a high proportion (78%) of stakeholders opposed the proposal to introduce independent audits of all workplace risk assessments and a majority (62%) were opposed to this proposal only for LPG installations.
8. A key theme made in response to a number of questions was that the existing legislative framework already requires much of what is proposed. As such we recommend that improved guidance, compliance and enforcement would be the most effective approach to deliver the outcomes sought by Lord Gill.
9. An analysis of the provisions of the existing legislation that applies to small bulk LPG installations in relation to the key elements of the proposed safety regime is given in Annex 3. This demonstrates that the existing framework facilitates the achievement of most of Lord Gill's specific proposals, in particular the installation record and supplier asset register. There is no existing legislative basis for the proposed register of suppliers but HSE believes that this can be achieved most effectively through voluntary agreements with industry and initial indications are that industry would support this approach.
10. Adoption of the proposals for a verification scheme for operators would require new legislation or changes to existing legislation in relation to the proposed criminal sanctions. The analysis in Annex 3 shows that the current framework already requires inspection and maintenance of LPG installations by competent persons. In addition, HSE and local authorities will already conduct independent inspection of installations. Furthermore, since the explosion at ICL, the Government has introduced tougher sanctions for dutyholders who fail to comply with these obligations through the Corporate Manslaughter and Corporate Homicide Act 2007 and the Health and Safety (Offences) Act 2008.
11. Undertaking a cost-benefit analysis (Annex 4) of Lord Gill's recommendations is difficult in the aftermath of an incident which claimed nine lives. This is a tragedy which touches many and the effects of which will be deep and long lasting. Discussing the cost of preventative measures against this backdrop may look insensitive but it is necessary to decide not whether action should be taken to prevent a recurrence, but what is the most effective form of action.
12. It is our view that the existing legal and enforcement provisions and available sanctions provide the necessary regulatory framework to ensure the safe operation of small bulk LPG installations. However, it is clear that more needs to be done to ensure dutyholders and others undertake their responsibilities and how they should meet them in practical ways. We believe that through more effective awareness raising in users of their legal obligations and the provision of guidance for users on how these can be met we believe we can more effectively deliver the outcomes desired by Lord Gill. This will be supported by appropriate enforcement action when required.

13. In relation to the independent audit of risk assessments, the majority of stakeholders responding to this aspect of the consultation expressed a number of concerns, captured in Annex 2. Critically, introducing an auditing system would serve to undermine the fundamental principle of the responsibility of the employer to assess and manage the risks that they create. This also raises issues of liability and where this would lie in the event of an accident/incident. In addition, introducing an auditing system would necessarily involve more bureaucracy and expense (see Annex 4). Overall, therefore, we believe that there are significant concerns over the proposal to introduce independent audit of risk assessments and that there does not appear to be a clear case made for such an approach.
14. The consultation responses indicated that there was a lack of clarity in respondents on the relative roles and responsibilities of HSE and local authorities in the enforcement of buildings in relation to LPG risks. Similarly the consultation revealed that guidance on the assessment of the structural safety of buildings in relation to LPG would be welcomed. Information on roles and responsibilities and assessment of building safety is available but may be difficult for operators of LPG installations to access easily. We therefore propose that HSE should develop guidance that will lay out the roles and clearly indicate where advice on assessment can be found.

### **Action**

15. The Board is requested to advise the Secretary of State for Work and Pension that:
- Many of Lord Gill's recommendations are already being taken forward
  - In relation to the proposed new safety regime, specific aspects, in particular the installation record, register of suppliers and supplier asset register should be adopted and HSE asked to engage further with stakeholders to identify the most effective way to take these forward which should be through the existing legal framework
  - That HSE should undertake work to ensure all LPG dutyholders and stakeholders understand and discharge their responsibilities for the safe use of small bulk LPG installations.
  - That the proposed verification scheme is not adopted as the desired outcomes can be delivered more effectively and rapidly by thorough application of the existing framework
  - That the case has not been made for independent audit of risk assessments and that this recommendation should not be adopted.
  - In relation to building safety and LPG, that HSE will include in any guidance produced a laying out of roles and responsibilities of HSE and local authorities and indicate where advice on assessment of structural safety can be found.

### **Paper clearance**

16. This paper has been cleared by Gordon MacDonald.

## **Actions already taken by HSE in relation to ICL Inquiry report recommendations**

Lord Gill proposed a four phase action plan to address the safe use of LPG in small bulk installations. The following summarises work already underway in relation to the four-phase plan.

### **Phase 1 – The Urgent Programme of Pipework Replacement and Alterations to Buildings**

#### *Underground metallic service pipework replacement programme*

- High level plan for systematic risk-based pipework replacement programme agreed between HSE and UKLPG in June 2009.
- This is a substantial programme of work covering up to 40,000 industrial and commercial premises. The aim is to replace the underground metallic service pipework in all industrial/commercial and domestic higher risk premises by the end of 2013 and the remaining industrial/commercial premises by the end of 2015.
- Replacement of pipework began at the end of October although some suppliers had already started replacement prior to the formal start of the programme.
- In parallel with the replacement programme, an HSE/Local Authority inspection campaign is underway. This will ensure that LPG users are aware of the need to respond to their suppliers and to replace pipework where appropriate. Inspectors will ensure that dutyholders comply with established safety standards and where these are not being met enforcement action will be taken to ensure workers and the public are properly protected.
- HSE has worked with the supply industry to develop an information leaflet<sup>1</sup> for commercial and industrial users of LPG on inspecting and maintaining such pipework pending replacement. An original version was distributed by the LPG supply companies to all commercial and industrial customers in 2006. A revised version was produced during 2009 and made available via the HSE website and in hard copy format.
- Awareness of the issue has also been raised with industrial and commercial users through the survey that has been conducted by LPG suppliers in developing the replacement programme and UKLPG have an information sheet available on their website<sup>2</sup> on inspection and maintenance of pipework.
- HSE has also commissioned a report from HSL on the use of cathodic protection for protection against corrosion of buried metallic pipes. This report should be available on the HSE website at the end of February.
- Though not within the remit of Lord Gill's Inquiry, HSE has undertaken a substantial piece of research to provide greater understanding of the key factors that contribute to the risk of LPG explosions in domestic premises. This research is now complete, has been externally peer reviewed and has led to a greater understanding of the risk factors in domestic properties. It has provided reassurance that for most domestic properties the risk of an explosion resulting in serious consequences for the people living there is very low.

<sup>1</sup> <http://www.hse.gov.uk/pubns/indg428.pdf>

<sup>2</sup> [http://www.uklpg.org/lpg\\_property/UIS015.pdf](http://www.uklpg.org/lpg_property/UIS015.pdf)

- Straightforward advice has been developed to help householders identify whether their property is among the small minority that might be at a level of risk making further risk reduction action worth considering. HSE will work with the supply industry to raise awareness amongst domestic users of this advice.
- HSE has engaged experts in corrosion to provide independent advice on the practical lifetime of buried metallic pipework under different environmental conditions. Their report is expected by the end of February and will help to provide further advice to domestic users on overall timescales by which they may wish to consider replacing their own pipework

#### *Installation pipework in buildings*

- In relation to building features that might contribute to an explosive atmosphere developing, the HSE leaflet on inspection and maintenance of buried metallic pipework that was distributed to all industrial and commercial customers advised that those operating installations should consider spaces within or under buildings where gas could accumulate. This message will be reinforced during the inspection campaign.
- HSE have been working with UKLPG to develop a web-based source that will be available in the first quarter of 2010 aimed at LPG users to provide information on what they need to consider for meeting their legal obligations for their installation. This includes the need to consider the adequate sleeving of entry pipes into buildings and the passage of pipework through unventilated voids.
- For new buildings, HSE has proposed via the DCLG consultation on Approved Document J, section 5 (that relates to fuel sources) that the revised document could highlight the need to consider LPG pipework including appropriate sleeving of entry points and the need to ensure that installation pipework does not pass through unventilated voids, referencing the existing legislative provisions and available guidance and standards.

### **Phase 2 – Creating a New Safety Regime**

The proposals for this phase formed the basis for the HSE consultation and are the subject of the main body of this paper in providing advice to Government in relation to these proposals.

### **Phase 3 – The Continuing Development of the Safety Regime**

- The natural gas distribution companies have a programme in place to monitor the state of buried polyethylene (PE) pipework and are undertaking research to establish the limits of integrity of pipework made from this material. The design life of PE pipe is 50 years and findings to date from the programme suggest that this limit could be extended.
- HSE will review the natural gas programme and will identify any possible gaps. If additional research work is needed to ensure the results of research on natural gas pipework can be applied to LPG then this will be taken forward by HSE.

### **Phase 4 – Establishing effective communications and clarifying responsibilities**

- HSE and UKLPG have been establishing strong communication channels, including regular meetings between the most senior representatives of both organisations through to the establishment of working groups to address specific issues such as the pipework replacement programme and domestic pipework.
- These developments have helped in raising awareness in LPG users and developing suitable guidance to help them meet their legal obligations. Practical examples of this are the production of the leaflet on inspection and maintenance of buried metallic pipework and a web-based information source aimed at LPG users to provide information on what they need to consider for meeting their obligations for their installation.



**Preliminary consultation into the  
recommendations of the Gill Report on the  
2004 ICL Plastics explosion**

Analysis of responses to the consultation document

## Introduction

HSE published a preliminary consultation into the recommendations of the Gill report on the 2004 ICL Plastic explosion to seek views from potentially affected stakeholders. The consultation formally closed on 19 November 2009 and responses were received via a number of media.

This report has been based on the 60 responses to the consultation document.

As some respondents may have offered a number of opinions in relation to some of the questions, total percentages under any one question where supporting comments were sought may exceed 100%. Throughout the report, percentages are expressed as a measure of those answering each question, not as a measure of all respondents.

The stakeholder breakdown of respondents was as follows:

Trade Associations	16
Industry/business	13
Non Government Organisation *	9
Consultants	5
Suppliers of liquefied petroleum gas	4
Unions	3
Public	3
Local/regional Government	3
Non-Departmental Public Bodies	2
Emergency Services	1
Central Government	1

*\*Includes professional bodies*

The report starts with an overview, followed by a summary analysis of each question within the consultation.

Annex A provides a statistical analysis of responses by respondent type. In general, where there are a minimum of **either** 5 responses **or** 10% of respondents these have not been included in the table but may be mentioned in the summary analysis.

Annex B lists all non-confidential respondents to the consultation.

## Overview

The consultation was in general well received and many of the specific recommendations included in the Gill report welcomed by respondents but with general concerns about proportionality and potentially unnecessary new requirements. The consultation dealt with the recommendations made by Lord Gill in his report on the ICL Plastics explosion. These recommendations were both liquefied petroleum gas (LPG) specific and in some cases more general. This overview addresses the general recommendations first and then moves on to consider those specific to LPG.

### *General recommendations*

In his report, Lord Gill made some general recommendations and the following paragraphs summarise stakeholder responses. An important general recommendation in the Gill report was the proposal for Ministers to consider whether existing regulations on risk assessment could be made more effective, perhaps by the addition of some form of independent safety audit. Stakeholders were asked to consider this proposal both for LPG and for risk assessments more generally in the workplace. In both cases a high proportion of stakeholders expressed opposition to this proposal with relatively smaller proportions in support. Reasons for expressing concern were similar in both cases. These included perceived increased burdens (including costs and bureaucracy) on business, with little perceived benefit, that existing regulations are adequate and, in relation to LPG, could be improved by better enforcement. Concern was also expressed that independent auditing would serve to fundamentally undermine the primary responsibility and attitudes of dutyholders in assessing and mitigating risks and potentially obscure liability where incidents may occur. At a practical level, the availability and independence of competent auditors was questioned by opposing respondents. Those expressing support for the proposal thought that there would be benefits for health and safety.

Another more generic issue addressed through the consultation was in relation to the assessment of structural safety in buildings, the role of the regulator in inspection and the production of related guidance. In relation to the roles and responsibilities of HSE and LAs, the majority of those who responded to these aspects felt that these were unclear and expressed concerns about the competency of inspectors for this specialised function and the ability of the authorities to resource such a function. A majority of respondents welcomed the proposal that HSE should consider publishing more detailed guidance on the assessment of structural safety in buildings.

### *LPG Safety Regime*

In relation to those aspects of the consultation that were specific to the proposed LPG regime, there were a range of responses. Although some of the specific aspects were welcomed by respondents, there was a more mixed reception to the overall regime as proposed in Lord Gill's report with around an equal proportion of respondents expressing support or opposition. In

those expressing support in some cases this was only partial with specific elements of the regime supported but not in its entirety.

**The key theme made in response to a number of the questions was that the existing legislative framework already requires much of what is in the proposed regime and that improved guidance and enforcement would be an appropriate approach to make it work more effectively.** Increased burdens on business (increased costs and bureaucracy) were also cited in relation to the overall regime.

The issue of competence and availability of competent specialists was another theme that emerged in the response to questions both relating to general and specific aspects of the proposed regime. Respondents expressed the view that the availability of competent staff was limited and to some extent already committed to the pipework replacement programme which may be negatively affected.

However, as stated above, stakeholders could see the benefits of specific aspects of the proposed regime and in general provided majority support for these. The creation and maintenance of supplier records was well supported, since these are already widely produced and could be made available to users of installations (they are already available if requested). Consistency of content may be an issue that might need to be addressed. Similarly, the creation and maintenance of an accredited registration scheme for suppliers was widely supported although respondents felt that issues relating to an accrediting and oversight body and the relevant processes would need to be addressed. However, overall, respondents felt that this would help to ensure the expected competence and standards of suppliers.

A majority of respondents also expressed support for the creation and maintenance of an installation record. It should be noted that there were very few (two) responses from the user sector and so this view may be unrepresentative of this important stakeholder group. As for the supplier records, consistency of recording was seen as an issue with the suggestion that a template and /or guidance should be developed to help users in developing their record.

On the issue of independent mandatory inspection and verification of LPG installations responses were more mixed with equal numbers expressing supporting or opposing views. Respondents felt that the existing legislative framework is adequate and already requires inspection of installations and some also felt that, as for the overall regime, this should not be applied to LPG in isolation for the same reasons.

In relation to the inspection of premises with underground metallic pipework, although there was some support for this more respondents were unclear on their view, although a number mentioned the ongoing pipework replacement programme and that this would address the risks. Availability of competent personnel to undertake these inspections was also raised as an issue. However, if such inspection were to be undertaken, a majority of respondents

who expressed a view felt that this should be conducted by the ACP as part of awarding a verification certificate should this recommendation be adopted.

To summarise:

- In relation to the general issue of independent auditing of risk assessments a high proportion of stakeholders were opposed to this recommendation both for LPG and more generally in the workplace.
- In relation to the general issue of the inspection of buildings for structural safety stakeholders felt that there is lack of clarity in HSE and LA roles and welcomed the proposal that HSE should consider publishing more detailed guidance on the assessment of structural safety.
- On the LPG specific recommendations, stakeholders highlighted that the existing legislative framework already requires much of what is in the proposed regime and that improved guidance and enforcement would be an appropriate approach to make it work more effectively.
- Stakeholders were generally supportive of some specific elements of Lord Gill's recommendations in particular the creation and maintenance of suppliers' records and installation records and the establishment of an accredited register for suppliers. However, stakeholders provided a more mixed response to the recommendation for verification scheme and the overall concept of the regime.

## **1 What are your views on the introduction of some form of independent safety audit (a) for LPG and (b) more generally**

There were 47 responses to question 1a

10 (21%) in support      29 (62%) opposed      8 (17%) unclear

There were 46 responses to question 1b

8 (18%) in full or partial support    36 (78%) opposed    2 (4%) unclear

A clear majority of respondents were opposed to this proposal applied either to LPG (62%) or more generally (78%). Smaller proportions supported the proposal in both cases, with small numbers not expressing a clear opinion.

Perhaps not surprisingly the arguments and concerns expressed by respondents opposed to the proposal expressed similar themes for both cases. The following presents the main common themes with statistical information presented for the separate cases.

### *Burdens on business*

This was mentioned by:

12 (26%) of respondents in relation to LPG auditing

24 (52%) of respondents in relation to general auditing

Increased costs and bureaucracy were seen as being significant burdens on business by these stakeholders. In relation to costs, for more general application, it was argued that the cost would not be proportionate to the risks being audited.

### *Existing regulations*

This was mentioned by:

10 (22%) of respondents in relation to LPG auditing

22 (48%) of respondents in relation to general auditing

These respondents expressed the view that the existing regulations in relation to risk assessment are adequate, one respondent adding that independent audits are carried out by HSE. Related to this, six (13%) respondents to the question in relation to LPG only, felt that better enforcement of existing requirements would be preferable to auditing.

### *Duties of employers and liability*

This was mentioned by:

6 (13%) of respondents in relation to LPG auditing

8 (18%) of respondents in relation to general auditing

These respondents commented that risk assessment is primarily the duty of employers and/or that the introduction of independent auditing of risk assessments would serve to obscure liability of responsible parties in the event of an incident (for example, who would be held responsible if an independent audit had been conducted and the risk assessments considered valid?).

Related to this, seven (15%) respondents commenting on application more generally felt that it would undermine practical health and safety due to the emphasis on independent auditing – employers either waiting to be audited or spending time to ensure successful audits.

### *Other comments*

Seven (15%) respondents to the more general application expressed concern that this proposal was considered in this somewhat specialised consultation.

In addition the following comments in relation to either LPG or more generally are representative of those made by fewer than 10% or five respondents in each case:

- The need for suitably competent auditors, particularly if they were having to assess a wide range of hazards and associated risks
- They would prefer that consultation with safety representatives be required legally
- For LPG the audits should be part of the verification scheme proposed for the installation
- Auditing would act to tighten up risk assessment and management
- If introduced HSE inspections should also be audited

## **2 What do you think are the practical implications of introducing an independent safety audits for (a) LPG and (b) more generally**

There were 31 responses to Q2a and 47 responses to Q2b.

As might be expected, some implications that were raised were mentioned in relation to both situations and mirror comments made in supporting respondents' responses to Q1.

### *Burdens on business*

This was mentioned by:

17 (55%) of respondents in relation to LPG auditing

41 (87%) of respondents in relation to general auditing

Respondents commenting on this mentioned the same issues as covered in responding to question 1 on their perceived view of added costs and bureaucracy independent auditing would bring.

### *Competence*

This was mentioned by:

25 (80%) of respondents in relation to LPG auditing

14 (30%) of respondents in relation to general auditing

Competence was mentioned in relation to a number of linked issues including availability of competent personnel to undertake the independent audits (likely that there would not be enough available) and who would have oversight of the development of competence standards and awarding of competence.

Related to this issue was the comment expressed by 12 (26%) respondents to the general application of auditing that this proposal could not be applied practically due to insufficient numbers of competent auditors being available.

### *Practical delivery*

This was mentioned by:

5 (16%) of respondents in relation to LPG auditing

17 (36%) of respondents in relation to general auditing

The undermining of practical health and safety due to an emphasis on independent auditing and/or how this might affect dutyholder attitudes and responsibilities was mentioned by these respondents.

Related to this, 11 (23%) respondents to general auditing were concerned that its introduction would undermine employers' duties to manage risk (8 respondents) and/or obscure liability in the event of an accident (7 respondents).

### *Other comments*

Twelve (26%) respondents to the question on general auditing expressed concern that the introduction of auditing more generally would serve to undermine existing regulations

In relation to LPG auditing only, 11 (28%) of respondents expressed a view that there was a lack of clarity in the Consultation Document on the scope of detail of how independent auditing in relation to LPG would be undertaken making it difficult to provide further comments.

In addition the following comments in relation to either LPG or more generally are representative of those made by fewer than 10% or five respondents in each case:

- In relation to LPG auditing may have a negative influence on pipework replacement
- Ultimately auditing would serve to improve health and safety
- Auditing of risk assessments would create a situation of competitive disadvantage for LPG
- Would provide an opportunity for consultants not sufficiently experienced, qualified or skilled to exploit the situation financially
- There may be confusion or duplication with regulatory authorities and their inspection roles
- The need for true independence of auditors

### **3 What are your views on introducing this type of regime for the control of risks from the supply, storage and use of LPG? Please give your reasons**

There were 36 responses to this question.

17 (47%) full or partial support    15 (42%) opposed    4 (11%) unclear

Of the 17 supportive respondents, 3 were only partially supportive. Where the support was partial this was because the respondent only supported some aspects of the proposal – for example the establishment of a registration scheme for suppliers but not for inspection and verification of installations. An almost equally number of respondents were opposed to the regime overall. A small number of respondents did not express a clear view on whether they supported or opposed this proposal in their response.

Ten respondents (29%) commented that in their view adequate legislation already exists requiring duty holders to meet the obligations proposed in the regime – most of these were opposed to the regime or did not give a clear view as to their position. Related to this view, seven (20%) of respondents felt that better enforcement of the existing regulations is required to ensure that dutyholders meet their current obligations and in some cases would prefer to see resources concentrated on this aspect.

Nine (26%) of the respondents cited costs and/or increased burdens to business as concerns regarding this proposal.

In the view of five (14%) respondents, the proposed regime should apply more widely than to just LPG and, for example, should include any substances that could generate an explosive atmosphere. Four of the five respondents who expressed this view appear to be opposed to the proposal primarily for this reason (the other respondent was supportive).

Five (14%) respondents expressed the view that the proposed regime could be achieved through the development of appropriate guidance or Code of Practice. This to some extent is allied to the view that existing legislation is already in place and such guidance would be an effective way of ensuring dutyholders understand what they need to do to meet their obligations.

In addition the following comments are representative of those made by fewer than 10% or five respondents in each case:

- Delivering such a regime may have a detrimental impact on the pipework replacement programme
- Concern about the impact on other areas of enforcement
- Availability of competent personnel

#### **4 What are your views on the creation and maintenance of supplier records? Please give your views**

There were 32 responses to this question.

29 (93%) in support          2 (6%) opposed          1 (3%) Unclear

The vast majority of respondents across all stakeholder groups supported this proposal with only a small number opposed and one that did not express a clear view.

On commenting further to support their view, nine (29%) of respondents indicated that such records are already produced, for example as part of normal business practice. Some respondents indicated records in relation to the storage tank and associated equipment currently are made available to users if they request the information.

Five (16%) respondents expressed the view that they believed that such records are already required under existing legislation for example in relation to requirements under the Pressure Systems Safety Regulations (PSSR) that apply to the storage tank.

In addition the following comments are representative of those made by fewer than 10% or five respondents in each case:

- This requirement would provide assurances about the competence of suppliers

- Such a requirement should be applied more widely than to just LPG
- There should be no compromise allowed between regulators and suppliers

## **5 What are the practical implications of introducing such a record scheme? Please give your reasons**

There were 28 responses to this question.

Seven (25%) respondents made the point, already expressed in relation to Q4 that such records should already be available and thus it should not be too problematic to provide these.

Six (21%) respondents made comments about the need to either specify the content of the documentation and/or that there should be consistency in the documentation produced. This would make it easier to check documentation and transfer of records should a user change supplier.

Costs and increased bureaucracy were mentioned by five (18%) of respondents as possible practical concerns with such a requirement. In some cases this may be in relation to the potential large number of customers that some suppliers may have.

In addition the following comments are representative of those made by fewer than 10% or five respondents in each case:

- The need for a governance of oversight body to ensure standards are met
- Such requirements should be applied more widely than to just LPG
- How long would records need to be kept
- Concerns about inadequate enforcement
- Concern about competence of the named person who would be in receipt of the records

## **6 What are your views on the creation and maintenance of an installation record? Please give your views**

There were 31 responses to this question.

26 (84%) in support            1 (3%) opposed            4 (13%) Unclear

The majority of respondents supported the proposal for the creation and maintenance of an installation record with only one respondent against and a small number not clearly expressing a view either way.

In relation to views expressed by respondents, four (13%) stated that in their view under existing legislation dutyholders should generate such records in order to meet their obligations. Related to this, four (13%) respondents suggested that relevant guidance or Codes of Practice should be produced to help dutyholders understand how to meet their obligations.

Four (13%) of respondents felt that there is would be a need for consideration of content/consistency of such documentation. This would help dutyholders to understand what they should document and how it could be done.

As for previous questions, three (10%) of respondents expressed the view that such requirements should be applied more widely than to just LPG for example to substances presenting a similar hazard that could lead to the generation of an explosive atmosphere.

In addition the following comments are representative of those made by fewer than 10% or five respondents in each case:

- Need a definition of installation record
- Resources would be needed to enforce this proposal
- Believe that this is already done by some dutyholders
- The record should only be amended when changes are made otherwise just certify annually that no changes have occurred

## **7 What are the practical implications of introducing an installation record? Please give your reasons**

There were 28 responses to this question.

Seven (25%) respondents expressed the view that there would be no practical implications of introducing an installation record. This view was expressed across a range of stakeholder groups including trade associations (2), industry/business (1), member of the public (2), emergency services (1) and consultants (1).

Five (18%) respondents commented that in their view there would be a need for clear templates and/or guidance for dutyholders to help them understand what they need to do and to produce this in a consistent format. Allied to this, three (11%) respondents suggested that dutyholders may have difficulty in gathering the information necessary to support the generation of such records. For example, accurate knowledge of the service pipework layout could be difficult to obtain.

Three (11%) respondents cited burdens on business through costs and increased bureaucracy that would be associated with the development and maintenance of an installation record. In relation to costs, some respondents felt that these could be high where these records do not already exist and need to be established.

Three (11%) respondents expressed concerns over the availability of suitably competent resource to develop the records. In particular the view was expressed that the named person responsible for the record should ideally have the appropriate competence or as a minimum at least understand the need for the record and why it needs to be maintained.

In addition the following comments are representative of those made by fewer than 10% or five respondents in each case:

- Existing legislation already applies
- Ensuring that the record is maintained
- Believe that this is already done
- Concerns about potential impact on pipework replacement if resource drawn away to help with this work
- Potential resistance from stakeholders

## **8 What are your views on the creation and maintenance of a registration and accreditation scheme for suppliers of LPG? Please give your reasons**

There were 33 responses to this question.

23 (70%) in support          3 (9%) opposed          7 (21%) Unclear

A majority of respondents expressed support for this proposal, including three suppliers of LPG that responded. Only a small minority opposed. However, almost a quarter of respondents did not express a clear view for or against.

In providing supporting comments, 13 (39%) respondents expressed views in relation to accreditation and monitoring of such a registration scheme. This included who would be a suitable accreditation and registration body and that work would be needed in order to develop accreditation criteria.

Six (18%) respondents felt that such a scheme would help to ensure the competency and standards expected of suppliers in some cases not just in relation to supply but also in supporting their users who may be less knowledgeable about LPG.

Four (12%) of respondents expressed the view that such requirements should be applied more widely than to just LPG for example to substances presenting a similar hazard that could lead to the generation of an explosive atmosphere.

In addition the following comments are representative of those made by fewer than 10% or five respondents in each case:

- Clarification of the scope of suppliers (e.g. not include bottled LPG)
- Any scheme should not be prohibitive for small suppliers
- Questioned how will it be financed

## **9 What are your views on the introduction of mandatory periodic verification for every LPG installation? Please give your reasons**

There were 32 responses to this question.

11 (34%) in support          11 (34%) opposed          10 (31%) Unclear

Equal numbers of respondents expressed support or opposition to this proposal with a significant proportion who did not express a clear view either way.

Ten respondents (31%) expressed the belief that the existing relevant legislative framework is adequate and already requires inspection of installations and that dutyholder should already be doing this and should be supported by appropriate enforcement action.

In the view of seven (22%) respondents, the proposed regime should apply more widely than to just LPG and, for example, should include any substances that could generate an explosive atmosphere. In the case of two respondents this was the primary reason for expressing opposition to the proposal.

Five (16%) respondents cited concerns over burdens on business including increased costs and bureaucracy which in their view were disproportionate to the risks.

Issues relating to competence, including availability of competent resource and relevant oversight, were commented upon by four (13%) respondents. Related to this issue, four (13%) respondents raised concerns of a potential impact on the on-going pipework replacement programme. In their view, it is likely that users of installations would seek help from LPG suppliers (who generally have this specialist resource or contract it) or draw resource away to help with inspection of the installation. This, they believe, would have a negative impact on the replacement of underground metallic pipework.

In addition the following comments are representative of those made by fewer than 10% or five respondents in each case:

- Comparisons were made with the Gas Safety (Installation and Use) Regulations
- Believed that this is already done by good dutyholders
- Raised issues of liability if there was an incident after inspection and verification
- Felt that it is a better approach than independent audit of risk assessments
- It would put LPG at an unfair competitive disadvantage compared to other fuels

**10 What are your views on introducing inspections for all premises with underground metallic pipework for LPG to try and identify conditions that could lead to leaked LPG building up in unventilated spaces? Please give your reasons**

There were 32 responses to this question.

13 (40%) in support

3 (9%) opposed

16 (50%) Unclear

A majority of respondents from across a range of stakeholder groups did not express a clear view on this proposal, providing comment without clearly indicating any preference. In some cases, this appears to be due to confusion over what would be inspected with some respondents referring to inspection of buried pipework outside premises. Of those 15 respondents that expressed a clear view, the majority supported the proposal with a small percentage against.

A number of comments were made in relation to this question, with the most by seven respondents (22%) in relation to issues of competence. These comments related to the availability and suitability of people competent to undertake inspections. A number of these respondents pointed out that in their view different competences would be required to inspect for example the installation pipework and the premises in which they were situated. Doubts were also expressed about whether there would be enough specialist available to undertake such work given the number of premises.

Four (13%) respondents expressed the view that this should be applied more widely than just to those premises with LPG and should apply to any where a similar situation with other substances with similar ability to generate explosive atmospheres could arise.

Four (13%) respondents felt that the risks relating to this issue would essentially be addressed through the replacement of metallic pipework through the replacement programme.

In the opinion of three respondents (10%) existing legislation adequately covered this issue and dutyholders should already check for any potential for LPG to leak and build up within their premises. Another three (10%) respondents felt that guidance or a Code of Practice would be useful in addressing this issue.

In addition the following comments are representative of those made by fewer than 10% or five respondents in each case:

- The inspection should include the whole installation
- This is already being done
- Inspections should be carried out jointly between regulators

**11 If such inspections were introduced, should they be part of the verification scheme set out above, meaning that an approved competent person (ACP) would have to conduct an inspection as one of the conditions for awarding a certificate? Please give your reasons**

There were 29 responses to this question.

16 (55%) Yes

8 (28%) No

5 (17%) Unclear

A majority of respondents were in favour of inspection of this proposal with fewer against it and around a fifth of respondents not expressing a clear view.

The key issue mentioned by 13 (45%) respondents was that of competence in particular the different types that would be required when inspecting for example the storage tank, pipework or building. The question of availability of such competent resource was also mentioned.

In addition the following comments are representative of those made by fewer than 10% or five respondents in each case:

- Potential costs to business
- The requirement should apply more widely than to just LPG
- This should be part of the verification scheme
- These inspections should be carried out by regulatory authorities

**12 What are your views on the way the roles and responsibilities of HSE and local authorities specifically in relation to structural safety of buildings are differentiated? Is this clear enough?**

There were 26 responses to this question.

18 (70%) Not clear            3 (11%) clear            5 (20%) not stated

The majority of respondents felt that the roles and responsibilities of HSE and LAs are not clear and only two respondents felt that they were. Around a fifth of respondents, whilst providing comments, did not express a view on whether they felt there is clarity.

In relation to supporting comments, six (23%) respondents raised the issue of competency of inspectors, pointing out that inspection of building safety requires specific competencies which would not be possessed generally by HSE and LA inspectors. Allied to this was the concern expressed by 4 (15%) of respondents of HSE/LAs being able to resource such inspections given the large number of workplaces.

In addition the following comments are representative of those made by fewer than 10% or five respondents in each case:

- Not required if there are independent periodic inspections
- Such inspections should involve both regulators and the relevant emergency services.
- Should be a role for the insurance industry.
- Much could be achieved through guidance

**13 Do you think that it would help to have the roles and responsibilities of these bodies in relation to LPG risk documented (for example, in an installation record)?**

There were 28 responses to this question.

23 (82%) Yes                      1 (3%) No                      4 (14%) Unclear

A clear majority of respondents supported this proposal with only one against and four not expressing a clear view.

There were no clear themes in supporting comments with the following comments being representative of those made by fewer than 10% or five respondents in each case:

- Should apply more widely than to LPG
- Should be made available to all including employees
- This is a matter for building control

#### **14 What are your views on HSE publishing more detailed guidance on the assessment of structural safety of buildings?**

There were 30 responses to this question.

18 (60%) Yes                      2 (7%) No                      10 (33%) Unclear

A majority of respondents were in favour of this proposal with a small number against and a significant number not expressing a clear view.

A number (five representing 17%) of respondents felt that any guidance produced should be broader than just for LPG. Three (10%) respondents questioned whether this is a role for HSE (e.g. should be covered by building regulations) and three respondents stated that such guidance should only be produced if it is useful and provides practical advice.

In addition the following comments are representative of those made by fewer than 10% or five respondents in each case:

- Should be addressed by a Code of Practice
- Any guidance should be developed with relevant stakeholders
- Any guidance should be backed up by enforcement

## Annex A: Responses to the Consultation - Statistics

### Q1(a) What are your views on the introduction of some form of independent safety audit for LPG?

There were 47 responses to this question

Response	Trade Association	Industry/business	NGO	LPG supplier	Union	Member of Public	Local Government	NDPB	Emergency Services	Central Government	Consultant	Total
Support	1	1	2	0	0	3	1	0	1	0	1	10 (21%)
Opposed	11	4	4	3	2	0	1	1	0	1	2	29 (62%)
Not clear	1	1	3	1	1	0	0	1	0	0	0	8 (17%)
<b>Costs/burdens on business</b>	7	2	0	1	0	0	0	1	0	0	1	12 (26%)
<b>Adequate existing legislation</b>	4	0	2	3	0	0	1	0	0	0	0	10 (21%)
<b>Employer's duty/obscure liability</b>	0	0	2	0	2	0	0	0	0	1	1	6 (13%)
<b>Better enforcement of existing legislative requirements</b>	2	0	0	2	1	1	0	0	0	0	0	6 (13%)

## Annex A: Responses to the Consultation - Statistics

### Q1(b) What are your views on the introduction of some form of independent safety audit more generally?

There were 46 responses to this question

Response	Trade Association	Industry/ Business	NGO	LPG supplier	Union	Member of Public	Local Government	NDPB	Emergency Services	Central Government	Consultant	Total
Fully or partly support	1	0	1	0	0	3	1	0	1	0	1	8 (18%)
Opposed	10	11	5	1	3	0	1	1	0	1	3	36 (78%)
Not clear	0	0	0	2	0	0	0	0	0	0	0	2 (4%)
<b>Existing Regulations cover</b>	7	6	4	1	1	0	1	1	0	0	2	22 (48%)
<b>Cost/burden to business</b>	4	5	2	1	0	0	0	0	0	0	1	13 (28%)
<b>Bureaucratic</b>	5	4	1	0	0	0	0	0	0	0	1	11 (24%)
<b>Employer's duty</b>	1	2	0	0	2	0	0	1	0	1	1	8 (17%)
<b>Undermine practical H&amp;S</b>	4	2	0	0	1	0	0	0	0	0	0	7 (15%)
<b>Inappropriate/wider consultation required</b>	2	3	1	0	0	0	0	0	0	0	1	7 (15%)

## Annex A: Responses to the Consultation - Statistics

### Q2(a) What do you think are the practical implications of introducing an independent safety audit for LPG?

There were 31 responses to this question

Response	Trade Association	Industry/business	NGO	LPG supplier	Union	Member of Public	Local Government	NDPB	Emergency Services	Central Government	Consultant	Total
Issues relating to competence (availability, oversight, development)	9	4	1	3	3	1	3	0	0	0	1	25 (81%)
Costs/burdens on business	10	2	0	0	0	1	2	0	0	0	2	17 (54%)
Lack of clarity on scope and detail	5	2	0	2	0	1	1	0	0	0	0	11 (35%)
Affect on dutyholder attitude and/or responsibility	3	1	0	0	0	0	0	0	0	0	1	5 (16%)
Confusion over or duplication with regulatory authorities	2	0	0	1	0	1	0	0	0	0	0	4 (13%)

## Annex A: Responses to the Consultation - Statistics

### Q2(b) What do you think are the practical implications of introducing an independent safety audit more generally?

There were 47 responses to this question

Response	Trade Association	Industry/ Business	NGO	LPG supplier	Union	Member of Public	Local Government	NDPB	Emergency Services	Central Government	Consultant	Total
Added cost/ burden to business	7	6	14	1	0	1	1	0	0	1	1	22 (47%)
Added bureaucracy	3	8	5	2	0	0	1	0	0	0	0	20 (43%)
Undermine practical H&S	5	4	4	0	3	0	0	0	0	0	1	17 (36%)
Define/ ensure competence of auditor	3	6	3	1	0	0	0	0	0	0	1	14 (30%)
Undermine existing regulations	3	7	0	1	0	0	1	0	0	0	1	12 (26%)
Insufficient number of auditors	5	1	2	0	2	1	0	0	0	0	1	12 (26%)
Obscure liability	2	1	0	1	2	0	0	0	0	1	0	7 (15%)
Undermine employer's duty	2	0	1	0	0	0	0	1	0	0	0	4 (10%)

## Annex A: Responses to the Consultation - Statistics

**Q3 What are your views on introducing this type of regime for the control of risks from the supply, storage and use of LPG? Please give your reasons**

There were 36 responses to this question

Response	Trade Association	Industry/business	NGO	LPG supplier	Union	Member of Public	Local Government	NDPB	Emergency Services	Central Government	Consultant	Total
Fully or partly support	4	1	2	2	0	3	1	0	1	0	3	17 (47%)
Opposed	5	2	0	1	3	0	1	0	0	1	2	15 (42%)
Not clear	1	0	1	1	0	0	1	0	0	0	0	4 (11%)
Existing Regulations cover	5	2	0	1	0	0	2	0	0	0	0	10 (29%)
Cost/burden to business	2	0	1	2	0	1	1	0	0	0	2	9 (26%)
Better enforcement of existing legislation	2	0	0	2	3	0	0	0	0	0	0	7 (20%)
Should be applied more widely	0	0	0	0	3	1	0	0	0	1	0	5 (14%)
Guidance/Code of Practice	2	0	0	1	0	0	1	0	0	0	1	5 (14%)

## Annex A: Responses to the Consultation - Statistics

### Q4 What are your views on the creation and maintenance of supplier records? Please give your views

There were 32 responses to this question

Response	Trade Association	Industry/business	NGO	LPG supplier	Union	Member of Public	Local Government	NDPB	Emergency Services	Central Government	Consultant	Total
Support	8	2	3	4	3	3	2	0	1	0	3	29 (90%)
Opposed	0	0	0	0	0	0	0	0	0	0	2	2 (7%)
Not clear	0	1	0	0	0	0	0	0	0	0	0	1 (3%)
Already done	4	0	0	4	0	0	1	0	0	0	0	9 (28%)
Required by existing legislation	2	1	0	1	0	0	0	0	0	0	1	5 (16%)
Should be applied more widely than LPG	0	0	0	0	3	0	0	0	0	0	0	3 (10%)

## Annex A: Responses to the Consultation - Statistics

### Q5 What are the practical implications of introducing such a record scheme? Please give your reasons

There were 28 responses to this question

Response	Trade Association	Industry/business	NGO	LPG supplier	Union	Member of Public	Local Government	NDPB	Emergency Services	Central Government	Consultant	Total
Should be available already	4	0	0	2	0	0	0	0	0	0	1	7 (26%)
Consistent/content of documentation	2	0	3	0	0	0	1	0	0	0	0	6 (22%)
Cost/bureaucracy	1	0	1	1	0	1	1	0	0	0	0	5 (18%)

## Annex A: Responses to the Consultation - Statistics

### Q6 What are your views on the creation and maintenance of an installation record? Please give your reasons

There were 31 responses to this question

Response	Trade Association	Industry/business	NGO	LPG supplier	Union	Member of Public	Local Government	NDPB	Emergency Services	Central Government	Consultant	Total
Support	6	3	3	3	1	3	2	0	1	0	4	26 (84%)
Opposed	0	0	0	0	0	0	0	0	0	0	1	1 (3%)
Not clear	2	0	0	1	2	0	0	0	0	0	0	4 (13%)
Existing legislation covers	1	0	0	1	2	0	0	0	0	0	0	4 (13%)
Guidance/Code of Practice	2	0	0	1	0	0	0	0	0	0	1	4 (13%)
Consistent/content of documentation	2	0	0	1	0	1	0	0	0	0	0	4 (13%)
Apply more widely than to just LPG	0	0	0	0	3	0	0	0	0	0	0	3 (10%)

## Annex A: Responses to the Consultation - Statistics

### Q7 What are the practical implications of introducing an installation record? Please give your reasons

There were 28 responses to this question

Response	Trade Association	Industry/business	NGO	LPG supplier	Union	Member of Public	Local Government	NDPB	Emergency Services	Central Government	Consultant	Total
No implications	2	1	0	0	0	2	0	0	1	0	1	7 (25%)
Clear templates/guidance	2	0	1	1	0	0	1	0	0	0	0	5 (18%)
Lack of competence	0	0	2	1	0	0	0	0	0	0	1	4 (14%)
Costs/bureaucracy	0	0	0	2	0	0	1	0	0	0	0	3 (11%)
Difficulties in gathering information	0	0	1	2	0	0	0	0	0	0	0	3 (11%)
Availability of competent resource	0	0	0	2	0	1	0	0	0	0	0	3 (11%)

## Annex A: Responses to the Consultation - Statistics

**Q8 What are your views on the creation and maintenance of a registration and accreditation scheme for suppliers of LPG? Please give your reasons**

There were 33 responses to this question

Response	Trade Association	Industry/business	NGO	LPG supplier	Union	Member of Public	Local Government	NDPB	Emergency Services	Central Government	Consultant	Total
Support	5	2	3	3	1	3	2	0	1	0	3	23 (70%)
Opposed	1	0	0	0	0	0	0	0	0	0	2	3 (9%)
Not clear	4	0	0	1	2	0	0	0	0	0	0	7 (21%)
Accreditation and monitoring of scheme	2	0	6	0	3	0	0	0	0	0	2	13 (39%)
Ensures standards/competency of suppliers	1	0	1	1	0	1	1	0	0	0	1	6 (18%)
Apply more widely than just LPG	0	0	0	0	3	1	0	0	0	0	0	4 (12%)

## Annex A: Responses to the Consultation - Statistics

**Q9 What are your views on the introduction of mandatory periodic verification for every LPG installation? Please give your reasons**

There were 32 responses to this question

Response	Trade Association	Industry/business	NGO	LPG supplier	Union	Member of Public	Local Government	NDPB	Emergency Services	Central Government	Consultant	Total
Support	1	2	1	0	1	2	1	0	1	0	2	11 (34%)
Opposed	4	1	1	3	2	0	0	0	0	0	0	11 (34%)
Not clear	4	0	1	0	0	1	1	0	0	0	3	10 (31%)
Adequate existing legislation	4	1	1	2	0	0	1	0	0	0	1	10 (31%)
Should be applied more widely than LPG	1	1	0	1	3	1	0	0	0	0	0	7 (22%)
Costs/burdens on business	3	0	0	1	0	1	0	0	0	0	0	5 (16%)
Competence issues (availability of resource, oversight)	3	0	0	1	0	0	0	0	0	0	0	4 (13%)
Impact of pipework replacement	1	0	0	3	0	0	0	0	0	0	0	4 (13%)

## Annex A: Responses to the Consultation - Statistics

**Q10 What are your views on introducing inspections for all premises with underground metallic pipework for LPG to try and identify conditions that could lead to leaked LPG building up in unventilated spaces? Please give your reasons**

There were 32 responses to this question

Response	Trade Association	Industry/business	NGO	LPG supplier	Union	Member of Public	Local Government	NDPB	Emergency Services	Central Government	Consultant	Total
Support	1	0	0	2	3	3	1	0	1	0	2	13 (40%)
Opposed	1	1	0	0	0	0	0	0	0	0	1	3 (10%)
Not clear	7	2	2	2	0	0	1	0	0	0	2	16 (50%)
Competence issues (different ones required, availability)	4	1	0	2	0	0	0	0	0	0	0	7 (22%)
Should be applied more widely than LPG	1	0	0	1	2	0	0	0	0	0	0	4 (13%)
Pipework replacement will address risk	1	1	0	1	0	0	0	0	0	0	1	4 (13%)
Adequate existing legislation	0	1	1	0	0	0	0	0	0	0	1	3 (10%)
Use guidance/CoP	2	0	0	0	0	0	0	0	0	0	1	3 (10%)

## Annex A: Responses to the Consultation - Statistics

**Q11 If such inspections were introduced, should they be part of the verification scheme set out above, meaning that an approved competent person (ACP) would have to conduct an inspection as one of the conditions for awarding a certificate? Please give your reasons**

There were 29 responses to this question

Response	Trade Association	Industry/business	NGO	LPG supplier	Union	Member of Public	Local Government	NDPB	Emergency Services	Central Government	Consultant	Total
Yes	1	1	3	1	3	3	2	0	1	0	2	16 (55%)
No	4	1	0	2	0	0	0	0	0	0	1	8 (28%)
Not clear	1	1	0	1	0	0	0	0	0	0	2	5 (17%)
Competence issues (different ones required)	4	2	1	4	0	1	0	0	0	0	1	13 (45%)

## Annex A: Responses to the Consultation - Statistics

**Q12 What are your views on the way the roles and responsibilities of HSE and local authorities specifically in relation to structural safety of buildings are differentiated? Is this clear enough?**

There were 26 responses to this question

Response	Trade Association	Industry/business	NGO	LPG supplier	Union	Member of Public	Local Government	NDPB	Emergency Services	Central Government	Consultant	Total
<b>Clear</b>	1	0	0	1	0	1	0	0	0	0	0	3 (11%)
<b>Not clear</b>	3	0	3	1	3	2	1	0	1	0	4	18 (70%)
<b>Not stated</b>	1	2	0	1	0	0	1	0	0	0	0	5 (20%)
<b>Competence of inspectors in building safety</b>	1	1	1	1	0	1	0	0	0	0	1	6 (23%)
<b>Concern about HSE/LA being able to resource</b>	1	0	0	1	0	0	0	0	0	0	2	4 (15%)

## Annex A: Responses to the Consultation - Statistics

**Q13 Do you think that it would help to have the roles and responsibilities of these bodies in relation to LPG risk documented (for example, in an installation record)?**

There were 28 responses to this question

Response	Trade Association	Industry/business	NGO	LPG supplier	Union	Member of Public	Local Government	NDPB	Emergency Services	Central Government	Consultant	Total
<b>Yes</b>	4	5	0	3	1	3	2	0	1	0	4	23 (82%)
<b>No</b>	1	0	0	0	0	0	0	0	0	0	0	1 (3%)
<b>Not clear</b>	0	1	0	1	2	0	0	0	0	0	0	4 (14%)

## Annex A: Responses to the Consultation - Statistics

### Q14 What are your views on HSE publishing more detailed guidance on the assessment of structural safety of buildings?

There were 30 responses to this question

Response	Trade Association	Industry/business	NGO	LPG supplier	Union	Member of Public	Local Government	NDPB	Emergency Services	Central Government	Consultant	Total
<b>Yes</b>	4	0	3	2	1	3	2	0	1	0	2	18 (60%)
<b>No</b>	1	0	0	0	0	0	0	0	0	0	1	2 (7%)
<b>Not clear</b>	2	3	0	1	2	0	0	0	0	0	2	10 (33%)
<b>Should be wider than just for LPG</b>	2	0	0	1	2	0	0	0	0	0	0	5 (17%)
<b>Is this a role for HSE?</b>	1	1	0	0	0	0	0	0	0	0	1	3 (10%)
<b>As long as useful and practical</b>	1	0	0	0	0	1	0	0	0	0	1	3 (10%)

## **Annex B: List of non-confidential respondents to LPG consultation**

All Party Parliamentary Group on Occupational Safety & Health  
British Aerosol Manufacturers' Association  
British Holiday & Home Parks Association  
British Hospitality Association  
British Occupational Hygiene Society  
British Safety Council  
Calor Gas Limited  
CBI  
Chemical Industries Association  
Cleaning and Support Services Association  
East Lothian Council  
EEF  
Energy Institute  
Energy Networks Association  
Engineering Equipment & Materials Users' Association  
Enmat International  
Families of ICL victims  
Gas Safe Register  
Gleaner Oils Ltd  
Health Protection Agency  
Heating and Ventilating Contractors Association  
Helios (Safety & Rescue Products) Ltd  
Institution of Civil Engineers  
Institution of Gas Engineers and Managers  
Institution of Occupational Safety and Health  
John Lewis plc  
LACORS  
London and South Eastern Railway Limited trading as Southeastern  
London Midland  
Magnox South Ltd.  
Northern Rail  
Perth & Kinross Council (Heath & Safety Enforcement Team)  
Practical Risk Management Ltd  
QinetiQ  
Rail Safety Standards Board  
Road Haulage Association  
Safety Groups UK (via Secretariat provided by ROSPA)  
Scottish Trades Union Congress  
Shell Gas  
South West Trains  
Trades Union Congress  
UK Petroleum Industry Association  
UKLPG  
Unite The Union  
Valvesec LLP



## Mapping of existing legislative framework to elements of the proposed LPG safety regime

Recommendation	Relevant existing Legislation	Comments
Accredited registration scheme for all bulk suppliers of LPG	None applicable	The current suite of existing legislation does not have any provisions that would cover such a registration scheme.
Supplier asset register – liability up to first stage regulator, record for each site supplied, user to be provided with safety critical data (for installation record)	Pressure Systems Safety Regulations 2000 (PSSR)	The users of a pressure system should not operate it unless they have established a written scheme for the periodic examination by a competent person of certain parts of the system and have it examined as described in this scheme. It should be maintained and relevant inspection records kept. Where the installed system is supplied under lease or hire and the supplier agrees in writing that they will undertake these responsibilities then the supplier will be responsible for discharging these duties and the user will not be. This will generally be the case with the storage tank, where the supplier may lease out the tank to the user. Thus in practice the information and documentation for the proposed asset register should already in many cases have been compiled by suppliers in relation to the requirements of PSSR. Consultation responses indicated that this information is currently made available to users if requested.
	Management of Health and Safety at Work Regulations 1999 (MWSHR)	These require an employer to make a suitable and sufficient assessment of risks to which his employees are exposed, and of the risks to non-employees arising out of the conduct of his undertaking (such as his activities associated with the storage tank e.g. filling) could present and to identify the measures necessary to comply with his duties under health and safety law; they also require the employer to appoint one or more competent persons to assist the employer in complying with the law, unless the employer is an individual (or individuals in partnerships) and they already have the necessary competence. An employer could be required to make the record of the significant findings of the risk assessment available to the user as part of the asset register, although the requirement to record the significant findings of the assessment currently only applies to employers with five or more employees.
	Provision and Use of Work Equipment Regulations 1998 (PUWER)	As the LPG tank and associated fittings may be considered as work equipment it will require maintenance. As work equipment exposed to conditions causing deterioration liable to result in a dangerous situation, it will require an inspection regime to ensure health and safety conditions are maintained and that any deterioration can be detected and remedied in good time. The user should liaise with the supplier of the LPG about maintenance since the supplier is likely to own the tank and will have their own duties with respect to it and may maintain it. Applicable duties under the Regulations cannot be delegated. Records of inspections, maintenance and any risk reduction measures produced under these obligations could contribute to the asset register.
	Dangerous Substances and	These regulations apply to work situations when a dangerous substance is present and

Mapping of existing legislative framework to elements of the proposed LPG safety regime

	<p>Explosive Atmospheres Regulations 2002 (DSEAR)</p>	<p>presents a risk to physical safety from, in particular, fire or explosion. They apply to employers (and the self-employed) operating in such work situations. This would include suppliers of LPG.</p> <p>Regulation 5 requires a risk assessment to be carried out by an LPG supplier and user, where they are an employer, in relation to the supply and storage of LPG. In relation to storage of LPG, the assessment should identify the hazards arising from the storage and determine measures that will: avoid or minimise the potential risk of a spillage or release of LPG, minimise the risk of fire or explosion occurring at the storage location, protect the storage areas from fires occurring elsewhere and mitigate the consequences of such incidents. The risk assessment should not be conducted in isolation from that required under MHSWR. The ACoP to DSEAR indicates that employers should ensure that whoever carries out the risk assessment should be competent to do so.</p> <p>Regulation 6 would require suppliers, where they are an employer, to eliminate or reduce risk, so far as is reasonably practicable, from the supply and storage. This will include designing and constructing suitable work processes so as to reduce risks to the LPG storage vessel and the provision of written instructions to engineers and drivers regarding inspection, maintenance and filling procedures. The ACOP requires storage facilities to be maintained in a safe condition.</p> <p>Regulation 7 places duties on LPG suppliers and users in relation to designating areas in and around LPG storage facilities where potentially explosive atmospheres could be formed, as hazardous zones. Measures should be implemented to prevent the ignition of LPG within the hazardous zones.</p> <p>Regulation 8 requires that warning systems, procedures and information are available for accidents, incidents or emergencies related to LPG (e.g. arrangements for dealing with spills during tanker filling) where the risk assessment means that there is more than a slight risk and the regulation 6(1) measures are not sufficient to control it.</p> <p>Regulation 9 requires that employees are provided with suitable and sufficient information, instruction and training where LPG is present in the workplace and Regulation 10 places duties on suppliers with respect to marking the content of bulk LPG vessels.</p> <p>Information produced and recorded by the supplier under their obligations relating to these Regulations could thus be passed to the user as part of any asset register.</p>
	<p>Gas Safety (Installation and Use)</p>	<p>Regulation 37 requires suppliers to make arrangements to ensure that reports of</p>

## Mapping of existing legislative framework to elements of the proposed LPG safety regime

	Regulations 1998 (GS(IU)R)	emergencies can be received and dealt with within 12 hours of the report so as to prevent the gas escaping. This leads to a 24 hours a day service being operated.
Installation record to include:		
(a) a concise account of the history of the installation from its introduction to the site setting out all modifications and adaptations to it, and all tank exchanges;	Management of Health and Safety at Work Regulations 1999	These require an employer to make a suitable and sufficient assessment of the risks to which his employees are exposed from the LPG installation, and of the risks to non-employees arising out of the conduct of the employer's undertaking and to have in place arrangements for the effective planning, organisation, control, monitoring and review of control measures; they also require the employer to appoint one or more competent persons to assist the employer in complying with the law, unless the employer is an individual (or individuals in partnerships) and they already have the necessary competence. Employers with five or more employees are required to record the significant findings of the risk assessments, and the ACOP states that such a record should include the measures in place to control the risks in question.
(b) detailed drawings of the installation from tank to appliance, with a full technical specification including a note of all working pressures, materials used and the like;		
(c) details of the safe operating envelope for the LPG system;	Provision and Use of Work Equipment Regulations 1998	As the LPG tank and associated fittings and pipework may be considered as work equipment it will require maintenance and should be inspected after installation and before first use to ensure that it is safe to operate. As work equipment exposed to conditions causing deterioration liable to result in a dangerous situation, it will require an inspection regime to ensure health and safety conditions are maintained and that any deterioration can be detected and remedied in good time. Inspections under this Regulation should be made by a competent person and records kept for the latest inspection. The user should liaise with the supplier of the LPG about maintenance since the supplier is likely to own the tank and will have their own duties with respect to it and may maintain it. Applicable duties under the Regulations cannot be delegated. Records of inspections, maintenance and any risk reduction measures produced under these obligations could contribute to an installation record.
(d) a summary of the engineering safeguards designed to prevent safety incidents;		
(e) a complete record of all inspections and reports of inspections;		
(f) a complete record of all maintenance carried out to any part of the system;		
(g) a set of layout drawings of those parts of the site in which the installation was situated;		
(h) a set of drawings of those parts of the building from the entry point to the LPG appliance and of those parts adjacent to the installation that could have safety implications for the installation itself or could be affected by an incident involving the installation;		
(i) a concise statement of the legal responsibilities of the various interests on site under the Health and Safety at Work Act and subordinate regulations;	Dangerous Substances and Explosive Atmospheres Regulations 2002	These regulations apply to work situations when a dangerous substance is present and presents a risk to physical safety from, in particular, fire or explosion. They apply to employers (and the self-employed) operating in such work situations. This would include suppliers of LPG.
(j) a concise identification of the parties having legal interests in the site; that is to say, the owners of the site or of parts of it; the occupiers of the site or parts		Regulation 5 requires a risk assessment to be carried out by an LPG supplier and user, where they are an employer, in relation to the supply and storage of LPG. In relation to storage of LPG, the assessment should identify the hazards arising from the storage and determine measures that will: avoid or minimise the potential risk of a spillage or release of LPG, minimise the risk of fire or explosion occurring at the storage location,

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<p>of it, whether under lease or licence; and the customer who is contracted with the supplier, if that customer is neither an owner nor occupier;</p> <p>(k) a statement of the legal responsibilities of those parties having an interest in the installation itself, namely the user and the supplier;</p> <p>(l) a notice identifying the enforcing authority for safety on the site;</p> <p>(m) a risk assessment covering the design and operation of the installation complying with MHSWR and DSEAR;</p> <p>(n) instructions for a response to any emergency that may arise; and</p> <p>(o) a current and valid verification certificate.</p>		<p>protect the storage areas from fires occurring elsewhere and mitigate the consequences of such incidents. The risk assessment should not be conducted in isolation from that required under MHSWR. The ACoP to DSEAR indicates that employers should ensure that whoever carries out the risk assessment should be competent to do so.</p> <p>Regulation 6 would require users, where they are employers, to eliminate or reduce risk, so far as is reasonably practicable, from the storage, transport and use of LPG on their site. This will include designing and constructing suitable work processes and maintaining the LPG pipework and appliances so as to reduce the risk and the provision of written instructions to engineers and operators regarding inspection, maintenance and use.</p> <p>Regulation 7 places duties on LPG suppliers and users in relation to designating areas in and around LPG storage facilities where potentially explosive atmospheres could be formed, as hazardous zones. Measures should be implemented to prevent the ignition of LPG within the hazardous zones.</p> <p>Regulation 8 requires that warning systems, procedures and information are available for accidents, incidents or emergencies related to LPG (e.g. arrangements for dealing with spills during tanker filling) where the risk assessment means that there is more than a slight risk and the regulation 6(1) measures are not sufficient to control it.</p> <p>Regulation 9 requires that employees are provided with suitable and sufficient information, instruction and training where LPG is present in the workplace and Regulation 10 places duties on users with respect to marking the contents pipework. In meeting the above duties, employers who are operators of an LPG installation would need to address similar features to that of the proposed installation record. Where there are less than five employees then there is no requirement to record the risk assessment.</p>
	<p>Gas Safety (Installation and Use) Regulations 1998</p>	<p>These cover LPG storage vessels and pipework only where the work premises themselves are covered by the regulations – mainly commercial premises such as offices, shops, hotels, schools, hospitals and similar places. Most of the regulations do not apply to the supply of gas to, or anything done in respect of a gas fitting at factories and certain other non-domestic premises (e.g. mines, quarries and agricultural premises); but, if part of those premises is used for domestic or residential purposes or as sleeping accommodation then they do apply to these parts. (Also, the definition of gas fittings excludes fittings, apparatus and appliances used for the purposes of industrial processes carried out on industrial premises).</p> <p>Regulation 7 requires that service pipework be installed so as to be protected from</p>

## Mapping of existing legislative framework to elements of the proposed LPG safety regime

		<p>damage and corrosion.</p> <p>Regulation 8 requires consideration of the affect of any building alteration on the safety of the storage tank and service pipework.</p> <p>Regulation 19 requires that no pipework should be installed under the foundations of a building or in the ground under the base of a wall or footings unless adequate steps are taken to prevent damage in the event of movement of the building or ground. In addition, this Regulation requires that there is no passage of pipework through an unventilated void.</p> <p>Work carried out under these Regulations on gas fittings and gas storage vessels should only be done by competent persons. Employers and the self-employed carrying out work in relation to gas fittings and service pipework must be registered under the Gas Safe Register scheme.</p> <p>Regulation 37 requires suppliers to make arrangements to ensure that reports of emergencies can be received and dealt with within 12 hours of the report so as to prevent the gas escaping. This leads to a 24 hour a day service being operated. Relevant work and any documentation produced if required in meeting obligations under these regulations would address similar aspects to those required of an installation record.</p>
<p>Verification scheme Every installation subject to mandatory periodic verification by an Approved Competent Person.</p> <p>ACP to verify the integrity of the installation and to certify whether or not the installation itself, the safety regime applying on the site and any mitigation measures in place at the site were satisfactory</p>	<p>Pressure Systems Safety Regulations 2000 (PSSR)</p>	<p>As outlined above the tank and associated fitting would be considered to fall under the requirements of these regulations and the tank user has a duty to have in place a written scheme for the periodic examination by a competent person and have it examined by a competent person as described in this scheme. It should be maintained and relevant inspection records kept. Thus in effect for this part of the installation there are already requirements for verification of the safety of the tank by a suitably competent person and for records to be available that can be checked for example by the relevant regulatory authority who can apply sanctions should these fall short of requirements.</p>
<p>Verification certificate granted or refused or held pending completion of remedial work</p> <p>Valid verification certificate required to continue to use installation</p> <p>Supply to an installation without a valid certificate</p>	<p>Management of Health and Safety at Work Regulations 1999</p>	<p>These require an employer to make a suitable and sufficient assessment of the risks to which his employees are exposed from the LPG installation, and of the risks to non-employees arising out of the conduct of the employer's undertaking, and to identify measures he needs to take to comply with health and safety law; they also require the employer to appoint one or more competent persons to assist the employer in complying with the law (including the carrying out of risk assessments required by DSEAR), unless the employer is an individual (or individuals in partnership) and they</p>

## Mapping of existing legislative framework to elements of the proposed LPG safety regime

unlawful		already have the necessary competence. Failure to undertake the assessments and put in place suitable control measures could result in sanctions by regulatory authorities including, in the case of serious concerns prohibiting use of the installation until deficiencies are satisfactorily remedied.
	Provision and Use of Work Equipment Regulations 1998	As work equipment exposed to conditions causing deterioration liable to result in a dangerous situation, the installation including pipework it will require an inspection regime to ensure health and safety conditions are maintained and that any deterioration can be detected and remedied in good time. Inspections under this Regulation should be made by a competent person and records kept for the latest inspection. The user should liaise with the supplier of the LPG about maintenance since they are likely to own the tank and will have their own duties with respect to it. Failure to comply with the requirements of the regulations could result in sanctions by regulatory authorities including in the case of serious concerns prohibition of the use of the installation until satisfactorily remedied.
	Dangerous Substances and Explosive Atmospheres Regulations 2002	These regulations apply to work situations when a dangerous substance is present and presents a risk to physical safety from, in particular, fire or explosion. Detailed information on the application of these regulations is outlined above under installation record. The risk assessment should not be conducted in isolation from that required under MHSWR. The ACoP to DSEAR indicates that employers should ensure that whoever carries out the risk assessment should be competent to do so. Failure to comply with the requirements of the regulations could result in sanctions by regulatory authorities including in the case of serious concerns prohibition of the use of the installation until satisfactorily remedied.
	Gas Safety (Installation and Use) Regulations 1998	These cover LPG storage vessels and pipework only where the work premises themselves are covered by the regulations – mainly commercial premises such as offices, shops, hotels, schools, hospitals and similar places. Detailed requirements are outlined above under installation record. Failure to comply with the requirements of the regulations could result in sanctions by regulatory authorities including in the case of serious concerns prohibition of the use of the installation until satisfactorily remedied.



## **Provisional Cost Benefit Analysis – Implementation of Recommendations of the Gill Report on the 2004 ICL Plastics Explosion**

Undertaking a cost-benefit analysis of Lord Gill's recommendations is difficult in the aftermath of an incident which claimed nine lives. This is a tragedy which touches many and the effects of which will be deep and long lasting. Discussing the cost of preventative measures against this backdrop may look insensitive but it is necessary to decide not whether action should be taken to prevent a recurrence, but what is the most effective form of action.

The following provides an overview estimate of costs and benefits of full or partial implementation of those recommendations in the Gill report upon which HSE consulted. Work that is already on-going to address the most urgent issues (e.g. the pipework replacement programme) is not included in these estimates.

A number of assumptions (outlined in Appendix 1) have been made in relation to the estimates and further work may be needed in order to substantiate some of these. Thus at this stage the costs should be viewed as provisional but as being indicative of their potential scale.

For ease of reference, the costs are broken down into the various areas covered in the consultation and summary of response document with a final overall estimate of cost provided.

### **Gill report recommendations for a safety regime fully implemented**

Although intended to be an integrated regime covering both supplier and users of LPG, it is convenient to consider the costs in relation to these two groups independently.

#### **Costs to suppliers**

Under the proposed regime, suppliers would need to register under a formal accredited registration scheme and provide users they supply with information relating to the supplier's assets on the site (e.g. in relation to the LPG storage tank and its safety assessment).

The costs to suppliers if these measures were fully implemented are estimated to be in the range of **£13 million** to **£20 million** over a 10 year period.

#### **Costs to users**

Under the proposed regime, operators of LPG installations would have a number of obligations. These include development and maintenance of an installation record and arranging for independent third party auditing of the installation so that a verification certificate could be issued to allow first time or continued operation.

The costs to users if these measures were fully implemented are estimated to be in the range of **£48 million** to **£159 million** over a 10 year period.

These costs include the costs of all LPG users being subject to an independent stand alone audit of their risk assessments. If however it can be arranged that the audit of risk assessments occurs at the same time as the verification certificate is granted to the user, efficiency savings are possible, estimated to be between £4m and £29m.

From the above an overall estimate can be made of the provisional cost to industry if the recommendations proposed in the Gill report were to be fully implemented.

The overall costs to industry if these measures were fully implemented are estimated to be in the range of **£61 million** to **£179 million** over a 10 year period.

### **Gill report recommendations for a safety regime – partial implementation**

The proposed Government response argues that the existing legislation applying to small bulk LPG installations provides the necessary regulatory framework to achieve what Lord Gill proposes for a safety regime as effectively through guidance, compliance and enforcement.

The response also agrees that some specific aspects of Lord Gill's proposals, supported by stakeholders through the HSE consultation, should be taken forward, in particular the establishment of a register for suppliers, the production of an asset register by suppliers, the development of a uniform demarcation point between the storage tank and associated pipework and the production of an installation record by the users.

The following provide an estimate of the costs to supplier, users and overall to business in taking forward these specific aspects.

#### Costs to suppliers

These would relate to a registration scheme, the cost of providing users they supply with information relating to the supplier's assets on the site (e.g. in relation to the LPG storage tank and its safety assessment) and the cost of establishing a demarcation point.

The costs to suppliers if these measures were fully implemented are estimated to be in the range of **£ 11 million** to **£17 million** over a 10 year period.

#### Costs to Users

The costs to users would primarily relate to the production of an installation record, including familiarisation costs.

The costs to users if these measures were fully implemented are estimated to be in the range of **£23 million** to **£82 million** over a 10 year period.

The overall costs to industry if the partial measures were implemented are estimated to be in the range of **£34 million** to **£99 million** over a 10 year period.

### **Independent audit of risk assessments**

Provisional estimates, of the cost of independent auditing of risk assessments for all enterprises, based on assumptions about the practical implementation of the scheme, suggest the cost to industry would be significant and somewhere in the order of hundreds of millions of pounds, over a ten year appraisal period.

### **Benefits**

Whilst the new safety regime may reduce risk, this is difficult to quantify as there will be a complex causation between the safety regime and health and safety outcomes. Furthermore, events such as those at ICL Plastics though resulting in extremely serious outcomes are relatively rare and it would be inappropriate to try to quantify estimated benefits in simple financial terms. In addition, though not part of this analysis, the pipework replacement programme will serve to significantly reduce the risk profile of this type of installation.

It is also expected that the new safety regime may deliver public assurance benefits, but these have not been able to be quantified.

## **Detailed breakdown of cost estimates for full implementation of Gill report recommendations**

### **1. Assumptions**

#### Suppliers

1. There are 40 suppliers of LPG.
2. It will take 0.5 hours to amend the supply contract templates to reflect the suppliers' responsibility demarcation, and then 10 minutes to re-issue the contract to each customer. Approximately half the market of LPG customers will have to be reissued with a contract (around 20,000 users).
3. It will take 10 minutes for paintwork around the first stage regulator to be painted.
4. It will take 3 days each for HSE (band 3), UKLPG and the accrediting body to draft accreditation requirements.
5. It will take 2 days each to promote the accreditation standards to industry by HSE (band 1 and 2) and UKLPG.
6. To review each supplier and grant them accreditation will take a third party half a day.
7. The cost of accreditation will be between £450 and £700 per day (based on average consultancy fees).
8. Re-accreditation will be required, assumed annually, taking 0.75 hours per supplier.
9. It will take each supplier 15 minutes to check that each user has a valid certification certificate.
10. It will take each supplier 0.5 days to create a record for each of the sites it visits.
11. In each subsequent year, it will take 1 hour to make any changes to current users records.
12. 95% of users each year will be repeat customers and so the supplier will already have a site record; 5% of users will be new each year.
13. 2 duty holders per supplier will spend 0.5 days becoming familiar with their requirements.

## Users

14. There are 43,000 industrial and commercial users of LPG, 3,000 of which are caravan sites.
15. Each installation record will take between 1 day and 1 week of time to prepare (by an employee classed as a professional per ASHE 2008). The length of time will depend on whether the user already holds similar records. For caravan sites, being generally more complex, the time taken might range between 2 and 5 days.
16. Annual updates to the installations records are required, assumed to take approximately 1 hour to complete. For caravan sites, the updates will take 2 hours.
17. It is assumed that it will take HSE 1 month of time to prepare guidance for the installation records and to produce a standard installation record template.
18. It would take HSE 3 days of HSE band 3 inspector time to develop a verification scheme, 3 days of time of UKLPG and 2 days of time of stakeholder groups.
19. There will be a rolling programme of third party audits to verify users and the process whereby the verification certificate is granted will take approximately 0.5 days of consultant's time per user.
20. The consultancy costs will range between £450 and £700 per day.
21. It will take each duty holder 0.5 days to organise and assist with the inspections.
22. If independent audit of risk assessments is performed at the same time as the verification process, then between 40% and 50% of the time taken to perform the audit in isolation will be saved.
23. It is assumed that 15% of installations will have their verification certificate withheld and will take £1,000 to perform the remedial actions required.
24. It is assumed that it will take 1 duty holder 1 day per user to become familiar with their requirements.

## Audit of Risk Assessments

25. It is assumed that there are 2.2m enterprises registered for VAT as of 2008 and there will be one main risk assessment per enterprise (including the 40,000 LPG users). Uncertainties in this assumption include for example the position of enterprises with less than five employees. These

are not required to retain records of their risk assessments and so if/how these could be audited is unclear.

26. Audits will take place on a sample basis of between 10% and 20%.  
Uncertainties in this assumption include whether the audit would be on a sample of enterprises annually. A total audit of all enterprises would have significant resource implications.
27. New entrants to the market generally balance with the number of leavers, and so the population of enterprises and risk assessments will remain fairly constant year on year.
28. Familiarisation with the new requirements for audit of risk assessments will take between 0.5 and 0.75 hours.
29. The consultancy fees will range between £450 and £700 per day.
30. It will take between 0.2 and 0.5 days to complete the audit of each risk assessment
31. It will take between 0.1 and 0.2 days for the duty holders to coordinate the audit of risk assessments.

## 2. Costs

32. The recommendations in the Gill report have been analysed in turn. The estimated costs are summarised below with a detailed explanation beneath

Costs	Present Value (10 year appraisal period) Range £m
<b>SUPPLIERS</b>	
EXTEND LIABILITY TO 1ST STAGE REGULATOR	0.1 – 0.1
FINANCIAL COST OF REGISTRATION FOR SUPPLIERS	0.0 – 0.1
ILLEGAL TO SUPPLY WITHOUT VALID VERIFICATION CERTIFICATE	1.4 – 2.1
SUPPLIER RECORDS FOR EACH SITE THEY SUPPLY TO	11.3–17.2
FAMILIARISATION TIME	0
	<b>13 – 20</b>
<b>USERS</b>	
INSTALLATION RECORDS - PRODUCTION BY USERS	12-67
INSTALLATION RECORDS - ANNUAL UPDATES	6 – 9
VERIFICATION SCHEME - INSPECTION COSTS TO USERS	13 – 30
VERIFICATION SCHEME - OPP COST TO USERS OF INSPECTIONS	1 – 1
VERIFICATION SCHEME - ACTIONS TAKEN TO OBTAIN CERTIFICATE	7 – 14
FAMILIARISATION TIME	5 – 6
INDEPENDENT AUDIT OF RISK ASSESSMENTS LPG USERS	4 - 32
	<b>48 - 160</b>
<b>HSE</b>	
REGISTRATION SCHEME FOR BULK SUPPLIERS	0
HSE DRAFTING OF TEMPLATE AND GUIDANCE: INSTALLATION RECORDS	0
VERIFICATION SCHEME - SET UP COSTS TO HSE	0
<b>INDUSTRY / STAKEHOLDER GROUPS</b>	
VERIFICATION SCHEME - SET UP COSTS	0
<b>TOTAL COSTS</b>	<b>61 - 179</b>

### Independent Audit of Risk Assessments

The consultation covered two options – independent audit of:

- (a) risk assessments at LPG installations only and
- (b) risk assessments in all workplaces.

Based on assumptions about the practical implementation of the audit of risk assessments, (see assumptions section above) the costs to industry for (a) are estimated to be in the range of **£4 million** to **£30 million** over a 10 year period.

There are considerable uncertainties in the assumptions about the total cost to industry, but based on the above assumptions and the calculation for LPG installations only the total costs for (b) are estimated to be in the order of hundreds of millions of pounds over a 10 year period.

The costs of a) can be mitigated by combining the audit or risk assessments with the audit which users are subject to in order to obtain a verification certificate. By so doing, cost savings of between £4m and £29m might be achieved (see below).

### **Costs to suppliers**

There are estimated to be 40 suppliers of LPG in the UK. There will be a number of requirements placed on suppliers in order to implement the requirements in the Lord Gill report. These are as follows:

***a) There is mandatory provision in every supply contract that the supplier's liability extends up to the 1<sup>st</sup> stage regulator***

The ICL Inquiry report found that in practice there are two arrangements in place which determine where the responsibility of the supplier ends: the Vapour Off Take Valve (VOTV), or extending to the First Stage Regulator. It is thought that the latter has the advantage that in many installations, the first-stage regulator is sited some distance from the tank, which increases the extent of the supplier's responsibility. Different suppliers may adopt different approaches so when there is a change in supplier, there could be a consequent change in the contractual arrangements and so there is scope for misunderstanding. It is recommended therefore that all suppliers' liability should extend up to the first stage regulator.

Based on the best available evidence it is believed that there is only one supplier who currently uses the VOTV to demarcate the end of their liability. It will be necessary for this supplier to amend all of its supply contracts to specify that responsibility will end at the first stage regulator.

There will be costs associated with drawing up a new contract template to specify this change in demarcation of responsibility and then education within the supply company of the new requirements.

It is thought that amending the contract template could take 0.5 hours of time. Each customer would then need to be provided with a new supply contract, which would take approximately 10 minutes per customer. It is assumed that this one supplier might have up to half the market of LPG customers, i.e. 20,000. The total time taken to reissue all supply contracts is therefore 200,000 minutes. Assuming that the supply contracts are amended by an administrative worker, the true economic cost of that worker per hour is £13.40 (being the gross hourly wage rate of an administrative worker per ASHE 2008<sup>3</sup> grossed up by 30% to reflect the non-wage costs of employing a person).

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<sup>3</sup> ASHE 2008, the Annual Survey of Hours and Earnings 2008. Available at: [http://www.statistics.gov.uk/downloads/theme\\_labour/ASHE\\_2008/tab2\\_5a.xls](http://www.statistics.gov.uk/downloads/theme_labour/ASHE_2008/tab2_5a.xls)

The total opportunity cost of updating the supply contracts to reflect the new demarcation of responsibility will be between approximately £38,000 and £56,000 in the first year of legislation.

The ICL inquiry also recommends that to fortify the statement of responsibility, the pipe-work on either side of the first stage regulator should be colour coded for the avoidance of doubt.

On the assumption that it takes on average 10 minutes to paint each premise in the first year for each of the industrial / commercial users then the costs are estimated to range between £61,000 and £92,000.

Therefore the total estimated cost of implementing this recommendation ranges from around £100,000 to £148,000.

***b) There is a registration scheme for all bulk suppliers – and registration should be a condition precedent to supply***

It would be expected that any registration scheme would involve accreditation of suppliers. Such an accreditation scheme would be run by a third party.

The drafting of the accreditation standards would require input from HSE, industry (UKLPG) and the 3<sup>rd</sup> part body. This would create an opportunity cost in terms of the time required to do this, assumed to be: HSE – 3 person days by a band 3 HSE professional. Industry and the host – 3 person days by a professional.

Time spent promoting the standards to suppliers; (expected to take 1 person day each for a band 1 and 2 HSE specialist inspector and 2 person days from industry professionals.

The total time spent drafting and promoting the standards has an insignificant cost.

It is assumed that all suppliers would seek to be accredited as soon as possible in order that they could continue to trade (i.e. in the first year) and then would need to be re-accredited on an annual basis. The re-accreditation process would take up less time, perhaps 0.75 hours. The charge for accreditation would be based on the average consultancy fees per day, estimated to be between £450 and £700. The total cost of accreditation based on the above assumptions has been calculated as between approximately £13,000 and £57,000.

If the re-accreditation takes place every 5 years instead, the total cost ranges from between £5,000 and £32,000.

***c) It becomes illegal to supply to installation if it does not have a valid verification certificate***

The costs of obtaining the certificate fall to the users and are estimated in the users section, see below.

It is possible that a proportion of customers will move to alternative energy supply. There would be switching costs associated with this, including the installation of new pipe-work and a potential change in energy bills. However, it is difficult to put an estimate on the number of users who will look for an alternative source of energy and so a quantification of these costs has not been performed.

Instead, it has been assumed that there will be 100% compliance with the requirement to obtain a valid verification certificate by users.

The suppliers will bear a cost in terms of time taken to ensure that the customer has a verification certificate before they supply the LPG. It is assumed that the suppliers would only need to check the verification certificate when they deliver to a new customer, and then on an annual basis for all other customers. Consequently, assuming around 40,000 users (with new entrants being offset by market leavers) then around 40,000 verification certificates will have to be checked annually.

It has been estimated that the process of checking the verification certificate and documenting the response may take 15 minutes by the supplier: 5 to read through the certificate, 5 to discuss any issues and 5 to document the check. Assuming this work is performed by an engineering technician<sup>4</sup> the present value of the cost over a 10 year appraisal period is between about £1.4m and £2.1m

***d) Each supplier required to maintain a formal record relating to each site to which it supplies***

According to the ICL Inquiry report, the formal record should include the supplier's current asset register, specifying the items of equipment of which the supplier contractually retains ownership; incorporating the provisions of the Installation Record as to the respective responsibilities of the supplier and user; and noting the critical safety features, inspections records and risk assessments for all such equipment. The supplier should be under an obligation to furnish a copy of the relevant section to each user.

Suppliers should ideally be keeping a formal record already as part of best business practice and it is believed by HSE that this is the case. However, there may be elements of the record keeping which need improving and so it is anticipated that compiling complete and up to date records for each site may involve some extra work for the suppliers.

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<sup>4</sup> Per ASHE 2008, the gross hourly salary of an engineering technician is £15 per hour. The true economic cost of the engineers time is 30% more, i.e. £20 per hour.

It is estimated that for each industrial / commercial installation using LPG, suppliers may need approximately 0.5 days worth of time updating records in relation to this requirement. The present value of the total cost in the first year is estimated to range between £3m and £5m.

In future years, it will be necessary to review records and update where necessary. This would depend on how many changes were required but could take on average 1 hour. New users may enter the market and so the time taken to produce records for the new users would be half a day. At the same time, some users would leave the market and so their records would no longer be subject to updates. However, it is assumed that the population of users will remain more or less constant, with new users equalling those that stop using LPG. So of the total population of LPG users, maybe 95% will be continuing and 5% new users. Based on these assumptions, the average time taken to review and update user records will be 1.1 hours per user. The total cost per annum in subsequent years will be between £1m and £1.6m.

The present value of the costs in the first year and subsequent years over a 10 year period is estimated to be between £11m and £17m.

**e) *Obligated to provide user with details of its asset register, critical safety features, examination, inspections and risk assessments for its equipment on user site.***

The costs of providing the users with the details included in the formal record will be included in the costs under (d) above which describes the cost of ensuring these records are up to date. This requirement is therefore just requiring the supplier to pass these records on, which should have a negligible cost.

**f) *Familiarisation costs***

There will be one off costs to suppliers of becoming familiar with their requirements on full implementation of the Gill report.

It is estimated that there are around 40 suppliers of LPG in the UK. If there are 2 duty holders per supplier that are required to become familiar with the new regulations in the first instance, then there will be 80 duty holders who have to spend time reading the new regulations. There are a number of new requirements that will be placed on suppliers, but many are already familiar with the content of the Gill report. Thus, it is estimated that it may take each duty holder 0.5 days of time to become familiar with these requirements and to discuss more widely with those who might be affected. Consequently, the total time required for familiarisation by suppliers would be 40 days.

The total costs of the familiarisation requirements on suppliers are estimated to be between £2,000 and £19,000.

The estimated total cost due to the requirements placed on suppliers is between **£13m and £20m**.

### **Costs to users**

It has been estimated that there might be around 43,000 industrial and commercial users of LPG, including 3,000 caravan sites.

#### ***g) Every LPG installation should have its own comprehensive installation record***

The ICL Inquiry report notes that all parties should know the extent of their ownership or other legal interest in the installation and the nature and the extent of their legal duties; and that these matters should be readily set out in a readily accessible source, an 'Installation Record' by means of diagrams, plans and appropriate documentation. It would be a clear and complete source of data regarding the installation and its history to which all interested parties could refer. It would also be a compendious source book and so would assist HSE in its inspection and enforcement functions. Preparation, maintenance and safe custody of the record should be the direct responsibility of the user. There should also be a named person who has responsibility for each record.

The amount of work that preparation of these records by each user will involve will depend on whether the user currently maintains records and the knowledge of the user (see page 136 of the ICL report for all requirements of the installation record). It is therefore anticipated to take between 1 day and 1 week of time by a member of staff at each LPG installation (excluding caravan sites). The opportunity cost of this time is equal to the full time equivalent wage rate of the member of staff involved. The occupation of users required to do this could range from a pub landlord, to the engineers at a large installation, or to small businesses who might use a consultant. Given this wide range, the average wage rate has been assumed to be somewhere in the region of that of a professional occupation (e.g. engineer). The likely cost in the first year would be between £200 and £1,000 per user. Given the assumed number of users, the present value of the total cost to industry in the first year would be between £7m and £44m

It is assumed that each year, the total number of LPG users will remain approximately constant, with those joining the market being more or less equal to those that leave the market. However, it is assumed that of the stable stock of 40,000 non caravan site users, 5% of these will be new users per annum. Thus, approximately 3,000 new users each year will also be required to produce an installation record in years 2 – 10 of the appraisal period. The cost per annum in absolute terms, based on the assumptions above, is between £300,000 and £2.5m.

The total present value of producing installation records over the 10 year appraisal period is calculated as between £10m and £62m.

The remaining 95% of users will have to ensure the installation record is up to date and any changes made as required. It is assumed that on average this will take 1 hour, as for the majority of users there will not be significant changes. The annual cost of updates to installation records for 95% of the assumed number of existing users is therefore calculated as between approximately £800,000 and £1.2m. Discounted over the period year 2 – year 10, the present value of the annual update costs is between £6m and £9m.

There are approximately 3,000 caravan sites in the UK which use LPG. It is expected that production of an installation record for each site will take slightly longer than for the rest of LPG users, assumed to be between 2 days and 1 week. The present value of the costs of this time in the first year range between £1m and £3m.

Due to the large start up costs associated with a caravan site, it is not expected that there will be any new entrants to the market over the appraisal period. However, there will be costs each year associated with updating the installation record, assumed to take 2 hours per record. The costs of these updates will range between £100,000 and £200,000 in absolute terms each year, with a total present value over the appraisal period of between £2m and £5m.

The total cost to users of the installation records is estimated to be between £18m and £76m.

Guidance on the installation record content and a suitable template should be developed by HSE in consultation with UKLPG. It is anticipated that the production of guidance and a template, including consultation with UKLPG may take 1 month of HSE staff time. Assuming this work was performed by a band 3 member of HSE staff, plus a day of the time involving band 1 review, then the total cost is estimated to be around £10,000, which is insignificant.

***h) Preparation, maintenance and safe custody of the internal record should be the direct responsibility of the named person responsible for custody***

See cost calculations under (g) above; it is assumed that the costs of safe custody are part of the costs of producing the installation record.

***i) There should be a formal verification scheme with periodic assessment of every LPG installation by an Approved Competent Person***

Existing guidance provided by HSE and the LPG CoP No 1 on inspection should be developed into a formal verification scheme by means of which

the integrity of every LPG installation would be periodically assessed by an approved competent person (ACP). A verification certificate would be granted or refused outright and the granting of a certificate would be a condition precedent to the continued use of the installation.

It is assumed that HSE, UKLPG and stakeholder groups would all be involved with the development of the verification scheme.

It is anticipated that it would take HSE 3 days of time of an HSE band 3 inspector to develop such a verification scheme, 3 days of time from UKLPG and perhaps 2 days of time from stakeholder groups. The opportunity cost of this time is assumed to be the lost productivity from these workers not being involved with work which is then assumed to be equal to the true cost of employing the person. Using the hourly wage rate for an HSE band 3 inspector, the ASHE 2008 average hourly wage rate for a professional occupation for UKLPG and the stakeholder groups, the total opportunity cost of the preparation time is between £2,000 and £3,000, which is insignificant.

It is assumed that the verification audits will have to be performed by a consultant. This will create a financial cost to the users in terms of the consultants' charge out rates, and also in terms of the opportunity cost of the time required to assist the consultant with the audit process. It is assumed that each audit will take 0.5 days of consultant's time and also 0.5 days of time of the user in terms of arranging and helping with the audit.

It is anticipated that there will be a rolling programme of verification audits over 5 years, so between 8,000 and 9,000 per year. It has been calculated that the total present value of the financial cost of the verification audits will be between £1.5m and £3.5m in the first year of implementation, with a total present value of between £13m and £30m over the appraisal period.

The opportunity cost to the duty holder at each installation is estimated using the true economic cost of time for a professional occupation per ASHE 2008.<sup>5</sup> The cost to industrial and commercial users of the verification audits is therefore calculated as between £90,000 and £140,000 in the first year of implementation, with a present value over the 10 year appraisal period of between £0.8m and £1.1m.

Post inspection, if a verification certificate is not granted but withheld pending the completion of remedial work, this would put a burden on the users to complete the work.

It is estimated that there may be 15% of premises inspected per year for whom the verification certificate is withheld, and that this might then cost

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<sup>5</sup> ASHE 2008. Annual Survey of Hours and Earnings, 2008. Available at: [http://www.statistics.gov.uk/downloads/theme\\_labour/ASHE\\_2008/tab14\\_5a.xls](http://www.statistics.gov.uk/downloads/theme_labour/ASHE_2008/tab14_5a.xls)

on average £1,000 to the duty holder (user) to make the necessary improvements in order to be provided with a certificate.

The total cost to users of needing a verification certificate to operate and so having to complete remedial work has been calculated as between approximately £800,000 and £1.6m in the first year with a present value over a 10 year period of between £7m and £14m.

The assumption has been made that 100% of users who have their verification certificate withheld will go onto take the remedial actions required to address the issues. It is possible that some users will instead cease to trade or look for alternative energy sources. These actions will incur costs more significant than £1,000. At the same time, some actions required will be rectified at a much lower cost. Therefore, it is thought to be reasonable to assume that the average costs over all users will be somewhere in the region of £1,000.

It is possible that the independent audit of risk assessments required for LPG users could be undertaken at the same time as the verification audits. If so, then there would be time savings to both the consultant with respect to travel time and getting to know the company. There would therefore be a corresponding time saving for the user of LPG with assisting with the conduct of the audits.

It is assumed that the time taken to perform the audit of risk assessments for the users of LPG might be reduced by between 40% and 50%. If this is the case, then the total consultancy fees for both audits ranges between £13m and £34m. The total opportunity cost of the time to duty holders for both audits will range between £800,000 and £1.2m. The total cost savings to users of combining the audit of risk assessments with the verification audits is estimated to be between £4m and £29m.

***j) It will be unlawful for a user to use / obtain further supply of LPG without a valid verification certificate***

See costings above for (i) above.

***k) The respective roles and responsibilities of HSE and LAs in the enforcement of the safety of buildings in relation to LPG risks should be clearly identified in every case and should be set out expressly in the installation record.***

The costs of this will fall under the preparation of the installation record (see (g) above).

***l) Familiarisation costs***

There will be one off costs to users of becoming familiar with their requirements on full implementation of the Gill report.

It is assumed that there will be 1 duty holder per user who is involved with the familiarisation process and that this may take each duty holder 1 day of time to become familiar with these requirements and to discuss more widely with those who might be affected.

Assuming that the cost of time to duty holders is the true economic cost of employment, which is the gross hourly wage rate of the average employee in the UK per ASHE 2008, the total familiarisation costs of the requirements on users are estimated to range between £5m and £6m.

The estimated total cost due to the requirements placed on users is between £48m and £160m, with separate audit of risk assessments for LPG users.

If the risk assessment audits are combined with the verification audits, then costs might be reduced to between around £44m and £131m.