Research into the Health and Safety culture within

Shell Plc in the UK retail forecourt market compared to other UK Retail forecourt businesses

MRes Occupational Health and Safety Management (in partnership with NEBOSH)

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Abstract

Shell is an organisation with a health and safety reputation second to none in the field of Oil exploration, extraction, refining and delivery as fuel for the retail forecourt industry.

They have a robust set of rules that governs how health and safety is to be managed on the Shell retail forecourt site, that are aligned to the International Oil and Gas producers core set of 9 lifesaving rules.

Shell's safety record in the UK marketplace speaks for itself and is a testament to the approach and health and safety culture fostered by Shell and their collaborative partnering organisations.

However, it is always prudent to assess the rules and compare with like for like retail forecourt providers to ensure the rules are still appropriate or require refining and more importantly are not too onerous or creating an overly bureaucratic burden on themselves and their partnering organisations and their supply chain.

This research study focused on four key areas:

- How is HSSE carried out differently within Shell compared to the other U.K. Forecourt providers?
- Are the U.K. statutory requirements closer to as low as reasonably practicable and as such no additional requirements are needed?
- How easy is it to procure new contractors based on existing HSSE requirements?
- Is there added complexity and duplication that can be avoided by consolidation?

Methods of analysis included responses to an online survey, face to face interviews (post covid19 rule relaxation in effect) and onsite visits to observe the HSSE culture in practice, this was key to observe how all the HSSE practices and indeed culture is delivered at the frontline by operational staff. Reponses to the online survey can be found in section 8 of this report.

The results from the analysis of the online survey data and interview process, show a very positive view of Shell's health and safety culture. The culture developed by Shell is deemed to be 'best in business' both anecdotally and from the online responses received.

The study finds that apart from some double counting of forms, there does not appear to be as much bureaucratic overhead as was perhaps originally envisaged when undertaking the research study. The conclusion within this research study has identified five key points that would enhance Shell's HSSE culture.

- For small to medium projects a paperless site management system integrated with Shells' online systems would ensure easier and on site management
- Implementation across all the PMC/FMC programmes of digital collaboration would make it easier to share legislative documents
- Develop a system of geographical location sub-contractor selection
- Greater integration of documentation across the supply chain

- Greater engagement with Shell retail, focusing on information, training, and project programming

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Furthermore, thanks go out to members of the Local Contractor Safety Council, the "water cooler talk" with these members, which directly led to this research study being undertaken, I feel your pain.

And finally, I would also like to thank the anonymous respondents to the online survey, whose valuable contribution enabled me to carry out the research in the first place.

Table of Contents:

Abbreviations & definitions

CO: Shell/L1Contract Owner

CH: Partner organisation: Vinci/Artelia Contract Holder

PMC: Project management contractor (Artelia)

FMC: Facilities management contractor (Vinci FM)

L2: PMC & FMC companies Partner organisations (Artelia and Vinci FM)

L3: Contractors to Partner organisation (L2)

L4: Subcontractors to L3

COCO: Company Owned, Company Operated

CODO: Company Owned, Dealer Operated

DODO: Dealer Owned, Dealer Operated

LMRA: Last Minute Risk Assessment

PTW: Permit to Work (Shell retail)

CEI: Critical Equipment inspection

NMPI: Near Miss/Potential Incident

TBT: Tool Box Talks

HSSE: Health, Safety, Security and Environment

JHA/JSA: Job Hazard Analysis/Job Safety Analysis

HRA: Hazard Risk Assessment

GIDS: Global Innovation and Design Standards

IOGP: International Oil and Gas Producers

LFI: Learning from Incidents

LSR: Life Saving Rules

WCF: Work Clearance Form

ALARP: As Low as Reasonably Practicable

BP: British Petroleum

GCSC: Global Contractor Safety Council

ACSC: Area Contractor Safety Council

LCSC: Local Contractor Safety Council

CBRE: Coldwell Banker Richard Ellis (Run the ONYX training academy)

UKPIA: UK Petrol Industry Accreditation (Card for working on a forecourt)

1.0 Introduction

The purpose of this research study, is to closely examine the various safety cultures utilised within the retail forecourt safety culture industry, primarily Shell Plc and whether it compares favourably with other competing forecourt providers, also if there is any cause for concern or indeed ways to improve the culture based on the findings contained within the results of the survey.

The term "safety culture" was first used in INSAG's (1986) 'summary report on the post-accident review meeting on the Chernobyl accident' where safety culture was described as:

"*That assembly of characteristics and attitudes in organisations and individuals which establishes that, as an overriding priority, nuclear plant safety issues receive the attention warranted by their significance*' Safety Culture, available online Wikipedia accessed 25/04/2022.

Shell Plc. (Shell) is one of the largest Oil and fuel producers in the World.

Headquartered in the U.K. in London at Shell Centre.

In the U.K. market they operate refineries, 544 retail forecourts across the country, supply telecommunications to private residencies as well as starting to become a major force if the delivery of sustainable energy to the U.K. power network.

The U.K. retail forecourt network is dominated by the 3 main petroleum producing companies, Shell, Esso, and BP with other retail forecourts being provided by major retailers such as Tesco, Sainsburys and Asda. Motor Fuel Group (MFG) is the largest independent forecourt operator in the U.K. however they operate under the Big 3's banner and as such they will be discounted from the research. Euro Garages also operate several sites across the network as an independent entity.

Shell has three modes of operation and management of their retail forecourts in the U.K. market place, these being:

- COCO: Company owned and Company operated. As implied by the abbreviation, Shell own and operate these and as such fall under the full Shell remit where it comes to health and safety, they also fall within the scope of the PMC and FMC contracts for project and facilities management.
- CODO: Company owned and Dealer operated. Shell own the estate infrastructure, which is then managed by a dealer network, these sites also fall under the full Shell remit in regard to health and safety. They also fall within the scope of the PMC and FMC contracts for project and facilities management.
- DODO: Dealer owned and Dealer operated. These sites belong to the dealer network but are branded as Shell forecourts. These sites have an "obligation" to adhere to the Shell health and safety culture but in reality, they utilise separate systems for health and safety management, falling outside the scope of both the PMC and FMC contracts.

All the retail forecourt providers operate their own standalone Health and Safety cultures, and each company must adhere to the local market unit's national legislation and regulations as appropriate. The basis for the differing safety cultures stems from incidents/accidents that have affected the industry in the past and these LFI (learnings from incident) sessions have driven the safety cultures to the position where they are today, what must be stressed is the cultures are driven from a Global perspective and what might seem overkill for a particular market unit i.e. UK as opposed to Indonesia, the culture must be adhered to as at the end of the day, it is designed to ensure that all employees, whether directly employed or as a contractor goes home safe and well.

Each forecourt provider outlines their own health and safety culture for working on their sites. These cultures differ widely in some cases and only very marginally in others, in the respect of Shell calling their requirements Job Hazard Analysis, whereas Esso call theirs Job Safety Analysis, both sets of documents contain exactly the same information, with only the JHA/JSA header changed and the colours, yellow and red for Shell and blue for Esso.

In the Global market place, Shell (L1) has taken the decision to 'outsource' their Project management (PMC) (L2) and Facilities management (FMC) (L2) to local principle contractors, removing themselves from the day to day management of said activities.

In the UK marketplace, Artelia are responsible for delivering the project management on site and Vinci Facilities management provide the facilities management provision of the contract.

The researcher is employed to manage the Health and Safety for facilities maintenance on the Shell retail forecourts, this involves multiple sub-contractors as well as directly employed mobile repair technicians.

Shell has a robust health and safety culture, however there are major differences in the way health and safety is managed within other major retail forecourt providers compared to Shell, with very little if any cross over or sharing of good practices amongst the various companies.

Both PMC and FMC companies develop their own processes of delivering Shell's health and Safety culture based on Shell standard policies and procedures but must also align their own company procedures where there is either a cross-over of cultures or if in fact the company has a greater more robust management process in place.

The research study encompassed both the PMC and FMC partner organisations, PMC based in London and FMC based in Manchester and as such during covid19 restrictions that were in place at the time, some of the data gathering was done via Teams calls with selected individuals.

However, site visits to live projects, PMC delivered and as part of the day to day maintenance regime delivered by the FMC company were carried out with adherence to the Government guidance regarding covid19

The researcher has background knowledge of most of the other providers, having previously been employed to manage health and safety across multiple accounts providing services to these providers and as such is aware of the main discrepancies.

This research study intended to carry out in depth research into the various health and safety cultures embedded with the forecourt sector, comparing like for like and providing

recommendations (if any) to align the cultures, making it easier to manage across the companies involved, including their contractors.

The research study looked at the following four key areas:

- How is HSSE carried out differently within Shell compared to the other U.K. Forecourt providers?
- Are the U.K. statutory requirements closer to as low as reasonably practicable and as such no additional requirements are needed?
- How easy is it to procure new contractors based on existing HSSE requirements?
- Is there added complexity and duplication that can be avoided by consolidation?

To attempt to answer these questions the researcher focused on two principle areas: Shell's Supply chain and its compliance levels and the methods of document interaction, namely the Global Innovation and Design Standards (GIDS), compared to other retail petroleum forecourt providers. This approach was further enhanced by adopting a blend of remote working (review of GIDS online), online data collection (online survey and engagement of the supply chain) and face to face interactions (Interviews).

As the researcher is directly employed to support Shell within the facilities Maintenance programme, the researcher will use the HSSE requirements from Shell as the benchmark when comparing the HSSE cultures from other companies in the U.K. marketplace.

As stated above, there are 3 major suppliers of forecourt service within the U.K. forecourt marketplace, with Euro garages and supermarkets also providing the services on their estate.

Each company outlines their own HSSE culture based on their, own company processes and procedures, Shell processes and procedures as well as local statutory legal regulations and requirements.

Each company has their own expectations in respect of contractor accreditation prior to conducting work on their respective estates, this is an added cost burden to most contractors, and can this be alleviated by all forecourt providers working from the same set of approved qualifications?

As well as accreditations, each company has their own terminology and colour schemes, that need to be applied to any documentation that contractors provide, resulting in multiple duplications of documents, is this duplication really required? Can one set of agreed upon documentation not be applied across the whole forecourt industry sector?

Does this bureaucracy of managing the HSSE culture add value or does it add additional burdens onto the contactors who provide services to the U.K. forecourt marketplace?

Until quite recently, Shell had a health and safety culture based primarily on fear.

This culture was driven by the "bonus culture" within the upper echelons of management across the Globe, if a Business unit was to report breaches of various Shell rules or any loss of containment (fuel spill) over 100L/Kg of product, then that Busines unit would lose the bonus payment for that year, this in turn led to contractors failing to report any breach of rules based on the fear of a 3month removal of their accreditation to work on Shell's retail estate, with the obvious knock-on effect of contractors going out of business themselves.

This fear culture has changed over the last 2 years (Globally) and there is much greater emphasis placed on sharing learnings from incidents, however contractors still need encouragement almost daily to ensure that they report in to the management system any potential/real breaches that they see or do themselves.

It will be a long process to finally dispel the fear culture and adopt the learnings culture, however this culture will see a marked improvement in both reporting and learning from so that the employees will be enabled to work safer on the retail forecourt estate.

2.0 Aim of the research

The aim of this research study is to investigate and compare the Health and Safety culture embedded within the Shell retail forecourt sector, with those other forecourt providers, to determine if there is potential cross overs of cultures.

To establish where good practice from either provider can be applied across the industry sector, aligning the cultures into one acceptable standard for all, having one set of agreed paperwork that is accepted on all retail forecourt sites, instead of each forecourt operator having their own set of paperwork.

2.1 Objective of the research

The objective of the research was to identify if current practices add value or detract from service providers HSSE cultures.

This research objective can then be used to either support the current HSSE cultures within the UK retail forecourt marketplace or be seen as a way to affect change in said network, so that everyone has the same HSSE culture embedded within, with supporting documentation standardised across the industry.

This standard approach would alleviate the need for contractors having multiple documents stating the same rules and regulations, relying instead on a uniform and consistent approach.

2.2 Relevance and Importance of the Research

The research is intended to compare the various health and safety cultures employed across the U.K. retail forecourt network with those employed by Shell. This research will highlight any differences between the cultures, be it for the good or indeed bad, with the purpose to provide a framework to align the cultures, if at all possible.

The research will be of relevant interest to those retail forecourt providers who manage their own health and safety cultures. The research will allow comparison between Shell and (anonymous) cultures so that a consensus on standardised procedures and methods of work could be agreed upon, making the culture easier to manage and less onerous for contactors, less paperwork, less financial outlay on a regular annual basis.

The research study will that the various health and safety cultures, currently place burdens on employees and contractors working within the forecourt industry and as such, with multiple rules and regulations to enforce, the employees can get lost within the detail of which apply where and this can and does lead to incidents on the forecourt, that with an agreed procedure and method of work, accepted by all forecourt providers, will mitigate against.

The researcher is in an ideal position to conduct this research having been a previous L3 sub-contract manager to Shell, Esso and BP and has seen first-hand the amount of different paperwork required for each forecourt operator and what their relevant health and safety cultures are managed at the frontline.

2.3 Anticipated outcomes

Whilst it can be presumptive to anticipate outcomes from the survey and interview process, it can be expected that Shell's retail forecourt division operates along similar lines to any other large scale retail organisation, in respect of health and safety management systems and procedures.

One potential anticipated outcome from this research study, is the potential dilution of the Shell HSSE cultural values the further down the supply chain you go. For example, the management of L4 contractors is wholly down to the L3 contractors employing these to carry out the works and as such the L3 should be providing at minimum a standard of onsite supervision of these work activities, this would provide comfort back to the L2 project management company/facilities management company, that the Shell HSSE culture is not compromised.

A further anticipated outcome would be discrepancies within the contractor paperwork, this would tend to be minor and would not tend to include any legally required documentation.

Issues surrounding duplication of documentation would also be anticipated, as you would expect to find in a robust and strong management system, where multiple documents of the same nature and content are produced on a regular basis.

It can also be anticipated that Shell HSSE culture, being as well developed as it is, may be market leading and as such no major changes are required, just tweaks to systems or processes as the study may indicate.

3.0 Literature review

The purpose of the literature review, in respect of this report, is to look at the various HSSE cultures that have been developed and implemented across the UK retail forecourt industry, to determine if they are of similar standard, meet the legislative requirements set by the UK Government and whether or not there is potential to improve the HSSE cultures by implementing changes where identified during the research process.

The term safety culture was first used in INSAG's (1986) 'Summary report on the post-accident review meeting on the Chernobyl accident' and was described as "*that assembly of characteristics and attitudes in organisations and individuals which establishes that as an overriding priority, nuclear plant safety issues receive the attention warranted by their significance"* seeing as this term was coined for from the Chernobyl disaster, later definitions have been published, but all revolve around the same core theme, people and organisations behaviour directly influences the safety culture of said organisation.

"*The safety culture of an organisation is the product of individual and group vales, attitudes, perceptions, competencies and patterns of behaviour that determine the commitment to, and the style and proficiency of, an organisations health and safety management"*

"Organisations with a positive safety culture are characterised by communications founded on mutual trust, by shared perceptions of the importance of safety and confidence in the efficacy of preventative measures" ACSNI Human factors study group: Third Report- Organising for Safety HSE books. Advisory committee on the safety of nuclear installations (1993) reprinted 1998.

This definition has become one of the most used terms where safety culture is referenced.

The Cullen report (2000) into the Ladbroke Grove rail crash saw safety culture as "*the way we typically do things around here*"; this would imply that every organisation has a safety culture- just some are better than others.

The concept of a 'safety culture' developed in connection with major organisational accidents A 'safety culture' provides an insight into how organisational barriers placed to prevent such accidents occurring, can be ineffective. "*With each disaster that occurs, our knowledge of the factors which make organisations vulnerable to failures has grown. It has become clear that such vulnerability does not originate from just 'Human Error', chance environmental factors or technological failures alone. Rather, it is the ingrained organisational policies and standards which have repeatedly been shown to predate the catastrophe*". Safety Culture: A review of the literature HSL/2002/25. Gadd, S; Collins, A M (2002) Sheffield: Health & Safety Laboratory.

"*Many companies talk about 'safety culture' when referring to the inclination of their employees to comply with a set of rules or act safely or unsafely. However, we find that the culture and style of management is even more significant, for example a natural, unconscious bias for production over safety, or a tendency to focusing on the short term and being highly reactive*" Organisational culture. Health and Safety Executive, available online, accessed 25/04/2022.

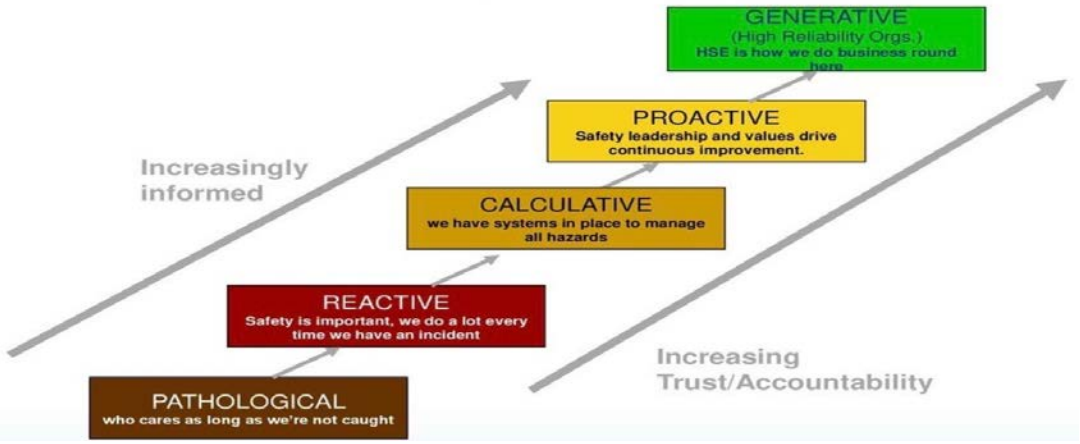
A previous Harvard Business School study found intervention to improve the culture at Shell Oil during the construction of the Ursa tension leg platform, contributed to increased productivity and an 84% lower accident rate. *Invisibilia: how learning to be vulnerable can make life safer.*

https://www.npr.org/sections/health-shots/2016/06/17/482203447/invisibilia-how-learning-to-be-vulnerable-can-make-life-safer accessed 22/06/22

The Hudson Safety Culture Maturity Model: Hudson (2000) is a basic five factor model of safety culture that has been recognised and adopted by the Oil and Gas Industry as the de-facto standard when developing safety programmes and initiatives.

The five factor model is:

- Generative- A healthy paranoia about safety
- Proactive- Safety is managed on the basis of procedures and documentation and uses trail indicators
- Calculative- Again safety is managed on the basis of procedures and documentation and uses trail indicators
- Reactive- Safety is an issue once something has occurred
- Pathological- Safety is an inconvenience, don't get caught!



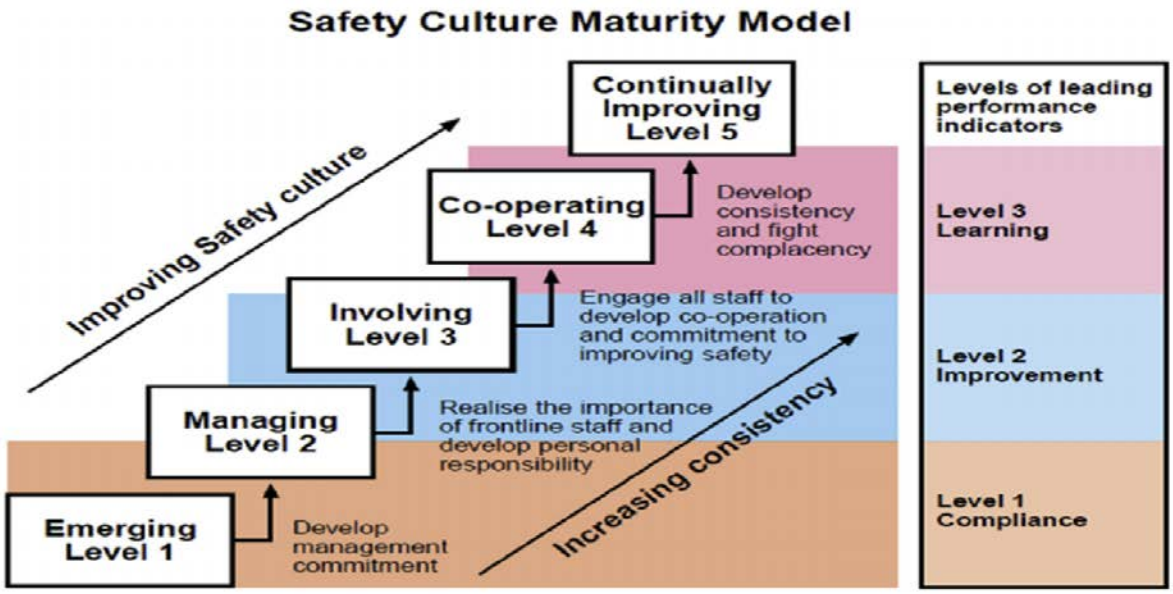
Graph 1. *The Hudson Safety Culture Maturity Model* (Source: Lawrie, Parker, Hudson, Investigating Employee Perceptions of a Framework of Safety Culture Maturity, Safety Science, 2005)

The UK HSE uses a similar model developed by the Kiel Centre, called the UK HSE Safety Culture Maturity Model which again focuses on five factors, these being:

- Emerging- Develop management commitment
- Managing- Realise the importance of frontline staff and develop personal responsibility
- Involving- Engage all staff to develop co-operation and commitment to improving safety
- Co-operating- Develop consistency and fight complacency
- Continually improving- Never stand still, HSSE culture needs to be monitored and improved

The UK HSE also uses 10 elements of behavioural approaches for safety improvement:

1. Management commitment and visibility
2. Communication
3. Productivity versus safety
4. Learning organisation
5. Safety resources
6. Participation
7. Shared perceptions about safety
8. Trust
9. Industrial relations and job satisfaction
10. Training



Graph 2. The UK HSE Safety Culture Maturity Model (Source: The Keil Centre for the Health and Safety Executive, 2000)

https://www.linkedin.com/pulse/understanding-safety-culture-maturity-models-nelson-oliveros/ accessed 06/06/22

In the UK retail forecourt market place Shell are deemed to be level 5 on the UK HSE Safety Culture Maturity Model, however there is always opportunities to improve and Shell are on a 5 year plan to improve their HSSE culture Globally.

During the research process, a detailed examination of Shell's Global Innovation and Design Standards (GIDS) was carried out, with various documents that are directly applicable to the HSSE culture were reviewed.

Documentation from other Retail forecourt providers was also reviewed during this phase of the research and form the basis for like for like comparison of the differing HSSE cultures each provider implements across the UK retail forecourt industry.

GIDS is a virtual library developed by Shell Globally accessed online via a link.

This library comprises such documentation as network retail design, construction, maintenance standards, toolkits for project delivery, procedures, HSSE requirements as well as information on market best practices and innovations.

The website hosts cross functional standards, requirements, and other links for other disciplines within the remit of the GIDS system, such as the annual safety day delivery articles, including any learning from incidents from the Global Shell business.

The virtual library is intended for use by both Shell, approved contractors and partner organisations and has been enhanced with an intuitive visual interface to enable users to quickly access relevant documents and information. The set-up of the webpage and interactive links is easy to use and enables users to easily select the area that they want to review and access it. The mobile app is also easily accessible and is a useful tool to be able to access the GIDS library remotely.

As part of this literature review, several of the GIDS links were reviewed to assess the process in place and the complexity in relation to the tasks being undertaken on site.

One of the main GIDS documents that apply to the retail part of the business is the Framework for co-locators at Shell sites. This frame work outlines the process to assess the HSSE approach for each co-locator deal. This risk based framework aims to balance the need for control against the risk of incurring unnecessary liabilities. The co-locators are generally known as Brand partner alliances.

The role of Contract Owner (CO) (Shell) and Contract Holder (CH) (Vinci in this instance) is critical in co-locator HSSE management. Early engagement between the two parties is essential, identifying colleagues in critical roles, e.g. HSSE manager, engineers, sub-contractors, and operational support staff. This framework is designed to be used regardless of the function of who owns the co-locator deal (Network delivery, Retail marketing, fuels etc).

The CO must complete a risk assessment deleting activities that are not relevant to the specific site and adding any unique activities. Any sites that will be undertaking medium or high-risk works will use the control framework manual mapping to ensure that the co-locators will comply with Shell HSSE requirements. There is an on-boarding induction and passport scheme for contractors to assess competence.
This passport scheme is managed for Shell by CBRE, based in Brussels and each named individual who wishes to work on the Shell retail estate has to complete this mandated induction training at a cost of 35 Euros per person as well as completing the UK Petroleum Industry Accreditation scheme training, again at a cost on average of £125 per person.

These costs are incurred by contractors/subcontractors before they even know if they will be placed onto the approved contractor matrix, and as such can be seen by many as a financial burden they do not wish to undertake, therefore excluding them from working in the retail forecourt industry.

Contractors must know the main risks and must know how to mitigate those risks. They are responsible for hazard control sheets (HCS) and their application through contractor management (yellow and red risks). There is a key document called Retail Contractor Health and Safety Requirements Ver. 5.2 - Updated to align with Control Framework changes for 2017 (Work at Heights, Contractor Manual, and Hot Works).

The purpose of this document is to establish Shell Retail's contractor Health and Safety requirements as defined by the Shell HSSE control framework and as such applies to all contractors and subcontractors who perform work at Shell retail locations globally.

This document supplements and is to be used in conjunction with other applicable requirements and local applicable laws and regulations.

The method of implementation of these requirements is at the discretion of the individual contractors. At a minimum, these requirements must be reflected in contractor Job Hazard Analyses (JHA), specific procedures and training programs as applicable.

For contractors, the inclusion of identified health hazards and controls in job hazard assessments (JHA) is sufficient – a specific hazard risk assessment (HRA) will not be required if this is completed. The process is clearly defined and explained in this framework document for the different roles and the requirements that each need to comply with.

Within GIDS risks are identified and classified in the Retail Engineering and SGW Contractor Safety case, referred to as the HEMP document. For all medium risks identified, the partner organisation (Vinci and Artelia within the UK business unit) have produced safe working guidelines, in which controls are identified, to mitigate the risk as low as reasonably practicable (ALARP).
These guidelines are written in English and it is down to individual partner organisations globally to translate into the local language. These documents are easy to read and follow and they are appropriate to the retail risks posed from the working environment.

As part of the requirements outlined in GIDS, the partner organisations must:

- Provide training programmes or toolbox talks so that all contractors/subcontractors are aware of the risks and controls. This is expected across both construction and maintenance activities undertaken on site.
- Assure themselves that contractors/subcontractors understand the control measures and that they have implemented them in their own JHA's. To provide assurance to Shell, the partner organisation conducts monthly checks on work orders, site audits and annual office audits and provides feedback monthly to Shell.
- Review the HEMP document annually to ensure that all hazards and mitigating measures are still applicable and any new hazards are identified, mitigated against and HCS are produced for contractors/subcontractors to follow. The review should also include learning's from any incident's that have occurred during the preceding year and any audit findings, the review is reported to the Shell Contract Owner for agreement and sign off.
- Post review the HEMP must be communicated out to the contractors/subcontractors who are employed on the Shell contract with acknowledgements required for auditing purposes.
- Review HSSE plans and procedures and make changes accordingly based on review of the HEMP document.

One of the main documents in the GIDS library is the 'Retailer contractor health and safety requirements' (2016) Ver 5.2, No author.

The purpose of this document is to set forth Shell retails contractor health and safety requirements as defined by the Shell HSSE global control framework. It is intended to supplement and be used in conjunction with all other applicable requirements and local laws for the country marketplace.
All contractors working on the Shell retail forecourt network must comply with the requirements of this document.
The document highlights that: "*Safety is the number one priority for all work performed*" and sets out the premise that: "*No one shall compromise safety in any way*"
The document also states: "*The method of implementation of these requirements is at the discretion of the individual contractors, at a minimum, these requirements must be reflected in contractor Job Hazard analysis (JHA), specific procedures and training programmes"*

Shell has identified that these Global control framework requirements are the minimum level to be adhered to and contractors must adhere to local regulations and/or legislation as mandated in the local market place by the relevant legislative authorities.

The document applies to all those working on the Shell retail forecourt estate and places duties on those partner organisations in the PMC/FMC sphere of works.

These duties are:

- Train all contractors via tool box talks or other training programmes, so that all contractors are aware of these risks and controls

- Assure themselves that the contractors understand the controls and have implemented them in their respective JHA's
- Review all paperwork in respect of these controls including the HEMP document on at least an annual basis and all incidents, near misses, potential incidents, audit findings and any new activities are to be taken into consideration.

BP have their "our code our responsibility" which sets out their principles for working for BP in the UK and Global marketplace. As such all partner organisations must always follow all the principles contained within the document.

The document outlines BP's commitment to safety, protecting the environment and respecting the communities in which it operates.

BP also have their own "HSSE requirements for contractors" (2019) Ver. 2. Johnson.

This document outlines the general HSSE requirements that contractors working in the BP retail forecourt environment, these requirements being:

- Contractors have documented and legally compliant practices that follow to protect the health, safety and security of their workers, BP employees, other workers and members of the public potentially impacted by their work.
- Contractors must also have documented practices that help to protect the environment.

Practices must achieve the following:

- Identify relevant site specific and job specific and environmental receptors.
- Identify control measures to mitigate risks to themselves and other who may be affected by their work.
- Communicate these hazards and control measures with the whole working party to achieve common understanding.
- Implement controls specified in the process to protect themselves and others including the environment.

A documented risk assessment and management process must be used. Examples of which are:

- Safe work method statements (SWMS)
- Job safety analysis (JSA)
- Job hazard analysis (JHA)

As can be seen, BP have not produced their own methods of documenting risks and management processes but have aligned themselves intentionally or unintentionally to the working practices of both Shell and Esso (JHA/JSA), with both methods being acceptable for working on the BP retail forecourt estate.

Further alignment can be seen in the nomination of a Contract Owner (CO) responsible within BP for the acceptance of goods and services supplied by approved contractors who work on the retail forecourt estate. The CO is the single point of contact for contractors on the BP network, again aligned with the Shell thought process.

Esso documentation "Esso retail service station Health and Safety manual" no recognised author or revision, outlines the safety basics that are the core principles of Esso's safety management system, designed to inform the document user of the minimum safety requirements whilst working on site.

All three HSSE documents place minimum requirements on the contractors working in the retail forecourt industry, managed by the Big three providers, which encourages the differing cultures to develop, however there are differences in the way the cultures are applied and expected requirements met.

Lifesaving rules/Lifesaving actions (LSR/LHA):
Both Shell and Esso use Lifesaving rules/Lifesaving actions within the cultures, these are derived from the International Oil and Gas producers (IOGP) 9 Lifesaving rules (LSR), simplified from the original 18 LSR during the revision of report 459.
Shell have applied 12 of the original 18 LSR across their work place, whereas Esso have applied 8. BP appear to not apply any across their network.

All LSR/LHA are mandatory across the Shell and Esso network and failure to abide to the rules is seen as a forfeiture of your right to work on the retail estate, resulting in an incident investigation, retraining on the rules to clarify the requirements or if a serious breach of LSR/LHA is found, removal of the individual or indeed the contractor for a minimum period of 3 months, possibly permanently.

The IOGP estimates that since 2008-2017, 376 people lost their lives in fatal incidents that might have been prevented by following one of IOGP's lifesaving rules. https://www.iogp.org/life-savingrules/ accessed 12/04/2022. Which shows the importance of following the LSR Vas laid out by the IOGP in the framework document.

Work clearance forms/Job clearance forms (WCF/JCF):
Again, as above both Shell and Esso use similar forms to record what work is taking place on the forecourt but in different formats. Shell employ the WCF whilst Esso employ the JCF.
Both forms are designed to record the safety conversations between the contractor and site representatives, who agree to what work is taking place and by signing the WCF/JCF give contractors permission to carry out the works on behalf on Shell/Esso. It is vital in both cases that the conversation takes place, this ensures that no unidentified hazards will be present during the works phase, i.e. fuel deliveries to site, which would facilitate a stoppage all ongoing work activity until the delivery has been completed.

Both sets of documents must be completed prior to works commencing on site and each WCF/JCF only covers one work task, therefore if an engineer is required to do more than one task on site, they must complete a separate WCF/JCF for each task.

Site safety rules/Golden rules:
All 3 Shell/Esso and BP have site safety rules/Golden rules applicable to all those working within the retail forecourt industry.
Again, these rules differ, the PPE requirements for Shell as a minimum are Hard hat, Safety boots and Hi-Viz clothing, Esso go one further and require coveralls to be worn as well, as does BP.

These rules are mandatory minimum standards applicable across the network and as each differs slightly there is a potential to be confused on the forecourt, especially if the contractor is working across multiple sites daily.
Dr. James Reason "Safety culture/ safety management system, aircraft safety management system/ASSI/Air safety support international" accessed online 06/05/22 suggests that a safety culture consists of five elements:

- An informed culture
- A reporting culture
- A learning culture
- A just culture
- A flexible culture

An Informed culture collects data and analyses the relevant data, actively disseminating the information to those who make decisions or are directly affected by the data, such as accident investigation data, which when sampled and analysed helps inform decisions with regards to PPE, Training requirements or changes to procedures.

A reporting culture creates an atmosphere where people have the confidence to report safety concerns without fear of blame, confidentiality must be maintained and information supplied must be acted on. Currently Shell have an issue in this respect due to their previous safety culture being base on “fear”, a fear of reporting an incident or accident for fear of reprisals from Shell.

A learning culture, where the organisation can learn from mistakes made, making necessary changes to stop the same thing happening again. Shell are moving forward with adopting a more “learning from incident” safety culture due to the past issues with regards to incident reporting and not learning from findings of accident or incident investigations.

A just culture, where errors or unsafe acts if not intended would not be punished, but if intended then disciplinary action must be taken. The move towards a more “Just” culture within Shell will enable a greater understanding of what issued are faced at the front line by the workforce, enabling Shell to work with the L2 partners to deliver a safer working environment for all involved.

A flexible culture, where the organisation and its people are open to adapting and accepting change. Shell are currently on a 5 year journey towards a more flexible approach to health and safety within their culture, those who have proven to be inflexible in their thinking or approach have already been moved on to different positions within the Shell company.

Over many years of public enquiries into process failures and incidents such as MS Herald of Free Enterprise (Sheen 1987), The Kings Cross underground station fire (1987) and the Piper Alpha oil platform explosion (1988) the lessons learnt from these was that is “it is essential to create a corporate atmosphere or culture in which safety is understood to be and is accepted as , the number one priority” Cullen. W.D 1990. The Public inquiry into the Piper Alpha disaster. HMSO, London.

Only by the full support and promotion of health and safety by senior management can a safety culture develop and change with the times, failure to adapt or to recognise that changes need to occur is highly damaging and, in the end, will result in the safety culture not being fit for purpose.

Therefore, a good safety culture maybe influenced by four factors:

- Senior management commitment to safety
- Realistic and flexible customs and practices for handling both well-defined and ill-defined hazards
- Continuous organisational learning through practices, such as feedback systems, monitoring and analysis
- Care and concern for hazards shared across the workforce

A broken health safety culture is usually characterised by accidents or incident where some or all the following traits have developed over time:

- “Profit before safety”, senior management prioritising profit above all else, where safety is seen as a cost negative on the balance sheet instead of an investment
- “Fear” As has been the case with Shell, contractors fear to report in case of reprisals
- “Ineffective leadership” where the leadership of the company has led to wrong decisions being made at the wrong time
- “Non-compliance” Management either being ignorant or failing to adhere to the required standards and regulations applicable to their line of business
- “Miscommunication” failure to deliver safety critical information at the right time or that the message has been diluted over time by not being reinforced with updates etc
- “Competency failures” where the expectation of peoples and contractors training and competencies in their role are presumed
- “Ignoring lessons learned” this is where any safety critical information is not shared, enforced, or indeed extracted from relevant sources.

3.1 Shell retail permit to work system

The Global Shell permit to work system has been in place for several years and is constantly under review to ensure it is fit for purpose for all market areas.

The retail permit to work system, is the reference framework for working on the estate and as such must be adhered to at all times by all those responsible for providing both project management and facilities management activities on site.

The content is generated by Shell Global HSSE management and uploaded to the GIDS system, where it is accessible by those who have access to GIDS.

There is a requirement for all permit issuers and permit holders to have a thorough understanding of the retail permit to work system and to undertake relevant training on the systems and its application.

This training can be delivered remotely via the Onyx training academy or face to face by those in the market unit, qualified to deliver the training. In the UK market, that training delivery is allocated to both the HSSE managers for the PMC/FMC sides of the contract delivery, with the FMC HSSE manager being the sole custodian of the Shell retail permit to work system in the UK.

This duty placed on the HSSE manager by Shell Global, ensures that only those who have the correct level of training from the approved sources, can be nominated to hold the post of Permit issuer/Permit holder, the market unit custodian keeps a record of those qualified to hold these posts and this record is update monthly and available for Shell both Globally and in the UK to review at any time.

As custodian of the permit to work system, feedback is provided to Shell Global on a 6 monthly basis, and any scopes for improvement are discussed at these sessions.

Shell requirements for relative roles within the permit to work system.

Role	Direct experience within the petroleum systems	Professional fully conversant with the permit to work system	Competent for relevant activities (W@H, excavation etc)	Have a valid safety passport
Custodian	Yes: Min 2 years	Yes	Yes	Yes
Permit issuer	Yes: Min 2 years	Yes	Yes	Yes
Permit holder	No: A knowledge level is expected	Yes	Yes	Yes

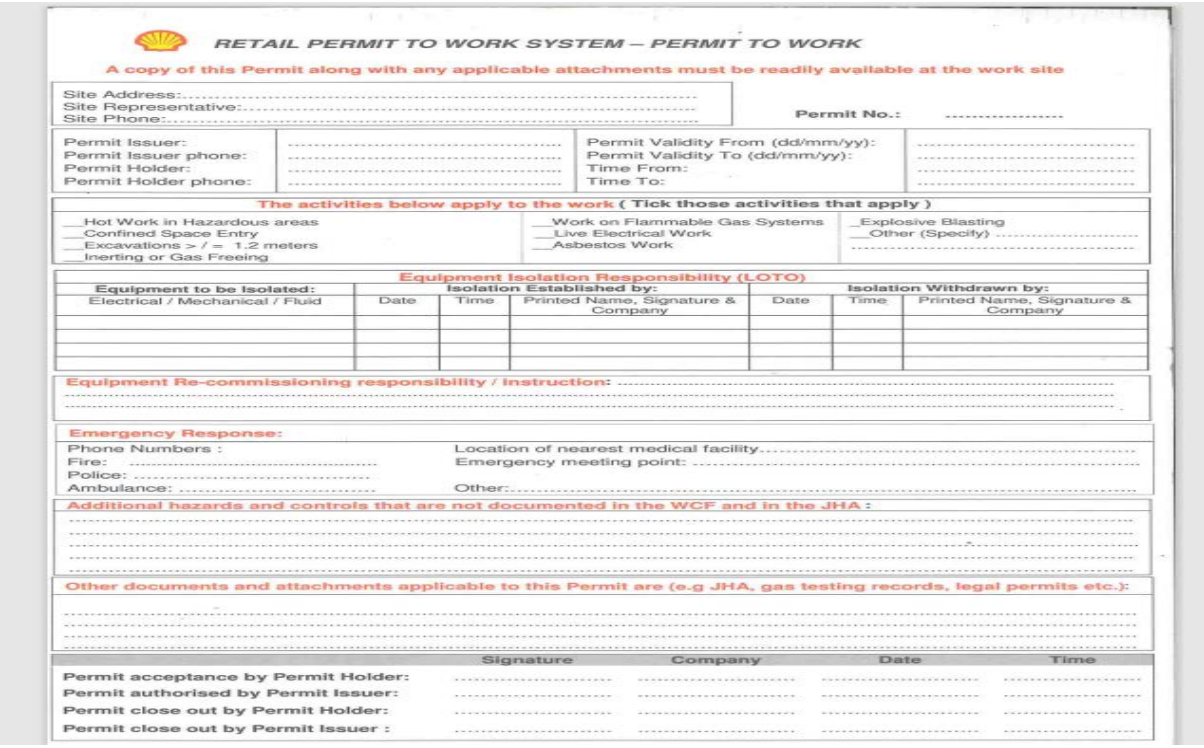
There are three documents that make up the Shell retail permit to work system, these being:

- Permit to work
- Job hazard analysis (JHA)
- Work clearance form (WCF)

These forms are used to control the hazards on site by allowing mitigation measures to be applied and recorded.

The use of the documents depends on the nature of the works being carried out and the risk rating as follows:

- High risk works: Permit + JHA + WCF
- Medium risk works: JHA + WCF
- Other (Low risk) works: WCF only



RETAIL PERMIT TO WORK SYSTEM – PERMIT TO WORK

A copy of this Permit along with any applicable attachments must be readily available at the work site

Site Address:
Site Representative:
Site Phone:

Permit No.:

Permit Issuer:
Permit Issuer phone:
Permit Holder:
Permit Holder phone:

Permit Validity From (dd/mm/yy):
Permit Validity To (dd/mm/yy):
Time From:
Time To:

The activities below apply to the work (Tick those activities that apply)

__Hot Work in Hazardous areas
__Confined Space Entry
__Excavations > / = 1.2 meters
__Inerting or Gas Freeing
__Work on Flammable Gas Systems
__Live Electrical Work
__Asbestos Work
__Explosive Blasting
__Other (Specify)

Equipment Isolation Responsibility (LOTO)

Equipment to be Isolated: Electrical / Mechanical / Fluid	Isolation Established by: Date	Time	Printed Name, Signature & Company	Isolation Withdrawn by: Date	Time	Printed Name, Signature & Company

Equipment Re-commissioning responsibility / instruction:

Emergency Response:

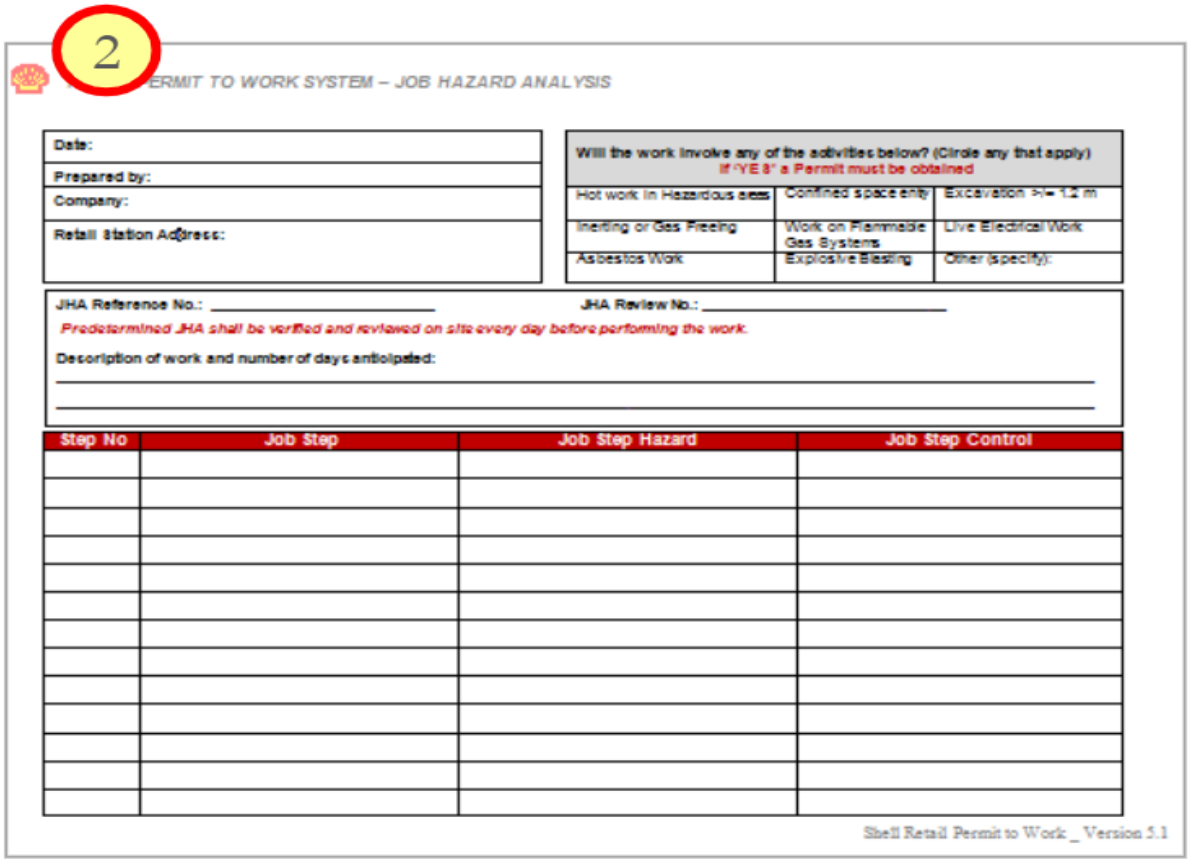
Phone Numbers :
Fire:
Police:
Ambulance:
Location of nearest medical facility
Emergency meeting point:
Other:

Additional hazards and controls that are not documented in the WCF and in the JHA :

Other documents and attachments applicable to this Permit are (e.g JHA, gas testing records, legal permits etc.):

	Signature	Company	Date	Time
Permit acceptance by Permit Holder:				
Permit authorised by Permit Issuer:				
Permit close out by Permit Holder:				
Permit close out by Permit Issuer :				

Fig 1. Shell retail permit to work document 1



2

ERMIT TO WORK SYSTEM – JOB HAZARD ANALYSIS

Date:	
Prepared by:	
Company:	
Retail Station Address:	

Will the work involve any of the activities below? (Circle any that apply) If 'YES' a Permit must be obtained		
Hot work in Hazardous area	Confined space entry	Excavation >/= 1.2 m
Inerting or Gas Freeing	Work on Flammable Gas Systems	Live Electrical Work
Asbestos Work	Explosive Blasting	Other (specify):

JHA Reference No.: _____ JHA Review No.: _____

Predetermined JHA shall be verified and reviewed on site every day before performing the work.

Description of work and number of days anticipated:

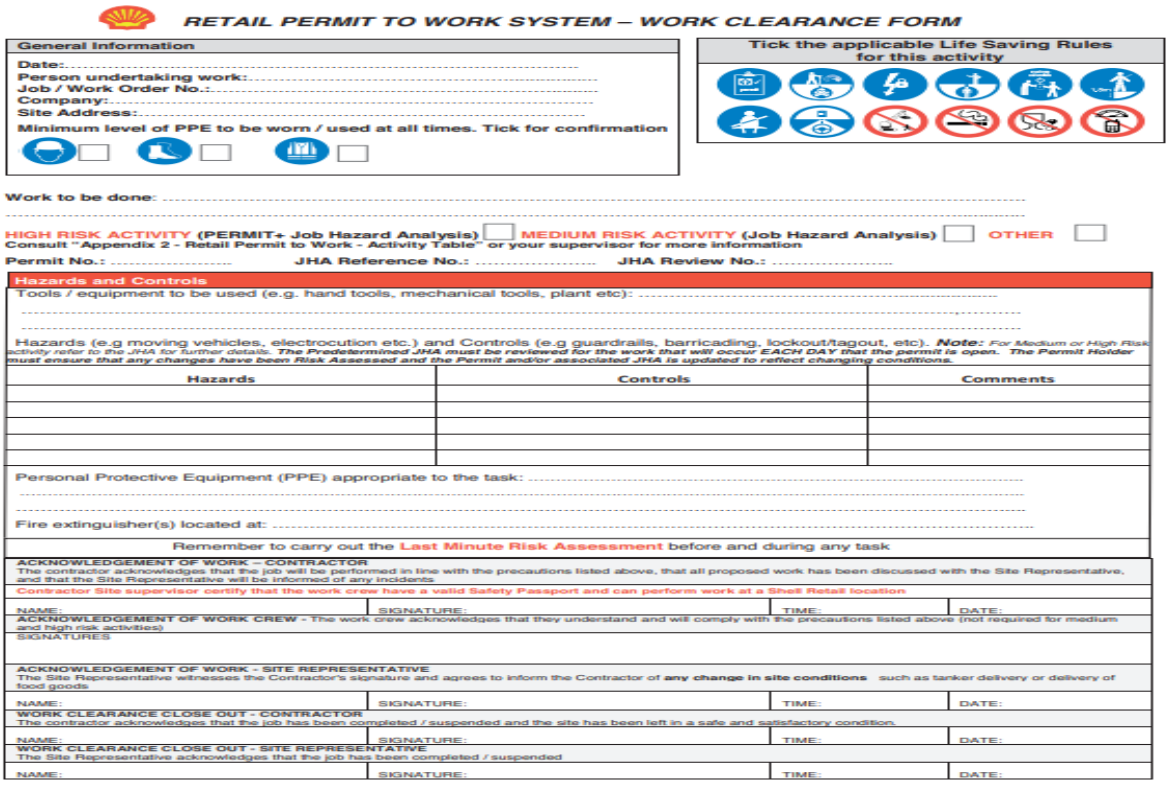
_____

_____

Step No	Job Step	Job Step Hazard	Job Step Control

Shell Retail Permit to Work _ Version 5.1

Fig 2. Shell retail job hazard analysis form (JHA) document 2



RETAIL PERMIT TO WORK SYSTEM – WORK CLEARANCE FORM

General Information

Date:
Person undertaking work:
Job / Work Order No.:
Company:
Site Address:
Minimum level of PPE to be worn / used at all times. Tick for confirmation

Tick the applicable Life Saving Rules for this activity

Work to be done: .....

HIGH RISK ACTIVITY (PERMIT+ Job Hazard Analysis) ☐ MEDIUM RISK ACTIVITY (Job Hazard Analysis) ☐ OTHER ☐
Consult "Appendix 2 - Retail Permit to Work - Activity Table" or your supervisor for more information

Permit No.: ..... JHA Reference No.: ..... JHA Review No.: .....

Hazards and Controls

Tools / equipment to be used (e.g. hand tools, mechanical tools, plant etc): .....

Hazards (e.g moving vehicles, electrocution etc.) and Controls (e.g guardrails, barricading, lockout/tagout, etc). ***Note:*** *For Medium or High Risk activity refer to the JHA for further details. The Predetermined JHA must be reviewed for the work that will occur EACH DAY that the permit is open. The Permit Holder must ensure that any changes have been Risk Assessed and the Permit and/or associated JHA is updated to reflect changing conditions.*

Hazards	Controls	Comments

Personal Protective Equipment (PPE) appropriate to the task: .....

Fire extinguisher(s) located at: .....

Remember to carry out the **Last Minute Risk Assessment** before and during any task

ACKNOWLEDGEMENT OF WORK – CONTRACTOR
The contractor acknowledges that the job will be performed in line with the precautions listed above, that all proposed work has been discussed with the Site Representative, and that the Site Representative will be informed of any incidents
Contractor Site supervisor certify that the work crew have a valid Safety Passport and can perform work at a Shell Retail location

NAME: SIGNATURE: TIME: DATE:

ACKNOWLEDGEMENT OF WORK CREW - The work crew acknowledges that they understand and will comply with the precautions listed above (not required for medium and high risk activities)
SIGNATURES

ACKNOWLEDGEMENT OF WORK - SITE REPRESENTATIVE
The Site Representative witnesses the Contractor's signature and agrees to inform the Contractor of **any change in site conditions** such as tanker delivery or delivery of food goods

NAME: SIGNATURE: TIME: DATE:

WORK CLEARANCE CLOSE OUT - CONTRACTOR
The contractor acknowledges that the job has been completed / suspended and the site has been left in a safe and satisfactory condition.

NAME: SIGNATURE: TIME: DATE:

WORK CLEARANCE CLOSE OUT - SITE REPRESENTATIVE
The Site Representative acknowledges that the job has been completed / suspended

NAME: SIGNATURE: TIME: DATE:

Fig 3. Shell work clearance form document 3

On a typical day only the JHA and WCF would be required for working on the retail forecourt estate, with the full permit system coming into effect should the need arise, typically being:

- Hot works in a hazardous area
- Confined space entry
- Excavations over 1.2 meters in depth
- Inerting or gas freeing of fuel lines
- Work on flammable gas systems
- Live electrical works
- Asbestos works
- Explosive blasting (Not carried out in the UK)
- Other as specified by local legislation or as deemed permittable by the PTW custodian

BP/Esso do not provide a formal training programme for permit to work, instead relying on the permit issuer/holder having previous knowledge, mostly likely gained from completing the Shell retail permit to work training package, seeing as there is a relatively small number of contractors within the industry and they work across all retail forecourt providers. This lack of formal training by other retail forecourt providers is a potential failure to ensure that the permit to work system is being fully adhered to by those working on site. The potential failing of this very important system underlines the importance of ensuring that only people trained to issue/hold permits to work do so.

Both BP/ESSO allow the use of contractor's own paper systems to record permit works instead of providing a system themselves.

Failure to manage the permit to work system effectively can lead to catastrophic failures on site, such example of this failure is the Piper Alpha oil rig disaster (1988), where the permit to work system was deemed to be chaotic and ineffective, which directly contributed to the disaster and loss of life.

Failure to manage a permit to work system could be endemic of a broken safety culture.

3.2 Leadership

The Health and Safety commission defines safety leadership as:

Strong and active leadership from the top:

- *Visible active commitment from the board*
- *Establishing, effective, downward communication systems and management structures*
- *Integration of good Health and Safety management with business decisions*

Worker involvement:

- *Engaging workforce*
- *Effective upward communication*
- *Provide high quality training*

Shell delegate responsibility for the management of the HSSE culture down to their respective L2 partner organisation, who must ensure that all relevant parties working on the

retail estate, comply with all the processes that have been developed over time, failure to do so would initially lead to an investigation carried out by the L2 with findings provided back to Shell. This learning from incidents is then applied across the Global network as required by GIDS and the HSSE reporting structure set by Shell. Shell maintain holders of the authority in all matters of HSSE within the Global market place in which they operate.

There are various forums for communication of health and safety issues between Shell and their respective L2 partner organisations, foremost is the Global Contractor Safety Council (GCSC) Chaired by Shell with Global L2 partners. The GCSC allows Shell the opportunity to test ideas and processes with their Global partners, before implementing them fully.

Information and decisions taken at the GCSC are fed down to the Area Contractor Safety Council (ACSC) Chaired by a selected L2 partner organisation from the area market place, the UK sits within the Europe and South Africa ACSC and as such both the PMC & FMC HSSE managers (L2) are members of this council. Meetings of the ACSC happen on a monthly basis, where LFI's are shared as well as anything of importance from the GCSC. The chair passes between members on an annual basis.

Again, information and decisions that have been passed down from the GCSC via the ACSC are presented to the UK marketplace at the Local Contractor Safety Council meetings (LCSC) held twice a year, in the Spring and Autumn, chaired by both the L2 partner organisations on a 6 month basis. This LCSC is also a forum for the local contractors who work on the UK Shell estate, both project and facilities, to communicate directly with the L2 PMC & FMC senior management team and allows the L3 to present to their peers on issues that have directly or indirectly affected them during the intervening 6 month period.

There is usually a Shel presence at the LCSC and this facilitates the local Shell management team the chance to interact with their supply chain on a formal and informal basis.

Once a year, Shell have a safety day, where the Global HSSE team decide on what topics they would like covered (Globally), this is then cascaded down to the ACSC/LCSC to deliver to their respective market places. Currently the topics on the 5 year rolling programme of improvements is focused on 'fair event handling' incorporating metrics and statistics and outside in risks.

Globally Shell have recently (2021) gone through a significant change in personnel, some of whom worked within the HSSE management structure and as such there has been an influx of new people taking up roles unfamiliar to them, this has led to L2 partners being more influential in the decision making process, however it has also led to stagnation where the 5 year plan is concerned.

4.0 Methodology

To achieve the aim and objectives of the study, the research study was conducted based on methods cited in:

- 'Research methodology' by Kumar (2019) 5th Ed.
- 'Research methods-The basics' by Walliman (2011) 2nd Ed.
- 'Doing your research project: A guide for first time researchers' by Bell and Waters (2018) 6th Ed.

It was identified at an early stage that one of the key elements for Shell, is the selection of contractors who are tasked to deliver the network programme of events.

These contractors (L2/L3) play an important role across the retail forecourt sector, carrying out a wide range of tasks from full store rebuilds to full facilities management of the retail, estate.

As such a large portion of responsibility, both contractually and under current health and safety legislation, is undertaken by the contractors. As can be expected Shell have a robust process in place for ensuring the supply chain complies with their expected levels of compliance and this measure is ensured by using a pre-qualification questionnaire and sequence of annual reviews carried out by Shell.

A research engagement strategy was developed (Appendix B) where it was identified that the focus for the research would be on operational members of the partner organisation and supply chain to the contract. Therefore, several methods were identified to best engage with these operational staff and to collate the necessary information.

The methods chosen to best deliver the required data sets were:

- Online survey
- Face to face interviews with selected individuals based on the online survey results

4.1 Design of the research

Pre-research study, the hypothesis was developed, which led to a framework that defined the philosophies that were to be used to gather the research data.

This framework was developed based on four key questions:

1. What are you going to do? The subject of the research
2. Why are you going to do it? The reason for the research by necessary or of interest
3. How are you going to do it? The research methods used to carry out the research study
4. When are you going to do it? The programme of work
   Walliman (2011:32)

From the framework the various techniques to gather and process data were analysed to determine the best course of data gathering and processing suited to the research study.

From the outset, the best course of action for collecting the data was deemed to be a single online study/questionnaire aimed at L2/L3 service providers to the Shell account from both the project and facilities side, giving a broad spectrum of answers to the questions posed, followed by targeted face to face interviews, again from the project and facilities management teams and selected L3 service providers, based on job roles, experience within the retail forecourt networks and availability. All members of the study cohort are known to the researcher, however all data collected was done so anonymously and interview responses cannot be attributed to any individual.

The online study/questionnaire went live Jan 22 and ran for a 2 week period. Once the data was analysed the question set for the face to face interviews was composed. The interviews

were conducted utilising a TEAMS call or where it was acceptable to both parties, at a neutral venue.

4.2 Data collection

For the purpose of the research study the decision was taken to conduct the research utilising both qualitative and quantitative research methods, with both the advantages and disadvantages of both methods analysed prior to undertaking the research study as explained below.

Quantitative research methods advantages:

- *More objective*
- *Findings can be generalised to whole populations*
- *Statistical tests can be applied to the data in making statements about it*
- *Survey responses can be automated*

Quantitative research methods disadvantages:

- *No account taken of human thoughts and feelings*
- *Research is dependent on tool chosen*
- *Can provide descriptive data of large populations but there can be difficulties with identifying reasons for the data or interpreting it*
- *Focus of research cannot be changed in the middle of the study, as this will invalidate the findings*

Qualitative research methods advantages:

- *Can explore the theory of behaviour in the 'field'*
- *Study of more culturally based or interpersonal topics possible*
- *Can provide data about emotions, beliefs, and personal characteristics*
- *Allows you to reflect on your own personal experience as a researcher as part of the process*
- *Usual to restrict research to a small number of participants*
- *Allows the use of 'insider' perspective*
- *Can be used to identify how people define constructs, such as anxiety, which can be hard to quantify*
- *Focus of study can be changed in the middle of the study if necessary*

Qualitative research methods disadvantages:

- *May lead to unanticipated result or results that contradict the hypothesis*
- *Ethics of participants permissions can be time- consuming*
- *Research process can be more complicated and time-consuming*
- *Findings cannot be tested with statistical significance*
- *Findings cannot be generalized to whole populations*
- *Less statistical power than large scale studies*
- *Greater risk of researcher bias affecting the results.*

Bell and Waters (2018:25,26) 6th Ed.

The online survey was devised by identifying key themes which could be analysed and compered, to obtain visibility of aspects of Shells delivery of the health and safety culture, what works well and what creates challenges and/or inefficiencies when completing works.

The key themes identified were:

- Understanding of Shell requirements
- HSSE culture developed
- Consistency of delivery
- Shell v Legislation
- Engagement

To protect the validity of the data, the surveys were carried out online anonymously and cannot be traced back to individuals in any way. This was paramount when developing an environment where non-sanitised feedback could be provided by the respondents.

Various online survey formats were investigated, with the most popular Survey monkey being discounted due to the fact it would only allow 18 questions, in the free format.

The chosen survey format was from 'free online surveys' https://freeonlinesurveys.com/.

This format allowed for the creation of the survey with the required number of questions, with a given timeframe for completion of 14 days.

The design of the online survey took on the form of 33 questions.

There were questions posed to generate engagement with the respondents, to gather their individual thoughts on what collectively could be done to ensure their continued safety whilst at work.

4.3 Interviews with selected individuals

Face to face interview sessions were conducted with selected operational and management staff from the partner organisations, both PMC & FMC, in order to identify in further detail, the delivery model, structure and working parameters that the partner organisations use when working for Shell; in addition to any key themes or challenges which they may face when managing and delivering the large programme of works required to maintain the retail estate.

From the online cohort of 30 respondents to the survey/questionnaire 10 members were selected to undertake the interview process. This was split 50/50 between both the PMC & FMC teams including senior management figures and operational frontline staff, to better understand the perceived HSSE culture from those who actually have to deliver it for Shell.

As previously stated, the interview process was undertaken using both TEAMS for interviewees located over 2 hours away from the researcher base location or face to face where the interview took place at a neutral agreed venue, allowing the interviewee to feel more relaxed when being subjected to questioning.

The interviews lasted for approximately 1 hour and followed a semi structured format, the questions asked can be found at Appendix A.

To set the interviewee at ease the opening questions were based informally on who they were, role within the industry, experience etc, before moving forward onto the main structured questions surrounding the research study project subject matter.

Some probing was required to garner further information from the interviewee and without these probes, the researcher would not have been able to fully collect the answers required to formulate the conclusions reached within this report.

The way in which this data has been primarily used, is to validate whether the feedback provided by operational members of the respective partner organisations has been shared with management teams and ultimately communicated to Shell via the previously established reporting lines.

To conclude the interview, each interviewee was thanked for their time and patience, and also assurances were given on the confidentiality and anonymity of the interviewee.

4.4 Site attendance

As part of the data gathering process it was necessary to visit both PMC and FMC sites to independently review how Shell HSSE processes are applied by frontline employees. These site visits across both programmes allowed the researcher to contextualise the feedback gained from both the online survey and the face to face interview process.

Sites visited:

- Ulverston
- Saxondale
- Betws Y Coed
- Brittania
- Orme View
- Hapsford
- Fulham
- Chester
- Northop North
- Northop

Shell Fulham was included in the programme of site visits as it was a complete demolition and rebuild, from a retail petroleum forecourt to a pure EV only forecourt and as such is the first pure EV retail forecourt developed by Shell, within the UK marketplace and required direct input from both the PMC to deliver the change and FMC to deliver post construction remedials pre-opening and ongoing FMC support for the life span of the charging station.

One of the limiting factors whilst carrying out site visits was the requirement on the project side, to be accompanied by project management, this may have unduly influenced the answers given by the frontline staff. No such requirement or limiting factor was encountered during FMC visits.

By immersing oneself in the situation, especially with the FMC frontline staff, who are used to having my presence on site, the HSSE culture could be seen to be effective as no perceived changes in behaviour or working practices was observed, this is borne out by reflecting and reviewing previous audits carried out on the front line staff.

5.0 Participants and sampling

Participants for the research study were recruited from within the L2/L3 community working on retail forecourts across the UK networks.

The initial approach was made during the November Local Contractor Safety Council meeting (Chaired by the researcher). At this meeting, the topic of the research was announced to the meeting attendees to gauge the level of interest prior to formal invites being emailed during January 2022.

A cohort of circa 30 participants was expected to be recruited from these contractors, this included front line employees who work directly on the forecourt and therefore exposed to the health and safety cultures daily and supervisors/managers who put the front line workers to work. This cohort gave a balanced overview of the differing health and safety cultures experienced within the retail forecourt environment.

A cohort of approximately 30 will be a reasonable number, allowing for a slight percentage of non-responders towards the online survey.

This cohort of 30 was sufficient to allow the gathering of the data required for the key themes to be developed for the face to face interview process.

A greater number of respondents would have proven to be too onerous and responses to time consuming when the process of data gathering and generating themes for the interview process was to take place.

All participants who responded to the online survey, are personally known to the researcher and as such it was easy to select the interviewees based on job title and experience within the retail forecourt sector, with the ideal candidate having experience across multiple different retailers, therefore their interview responses were more valid for comparison against someone who is relatively new to the industry or only works on the Shell contract.

Face to face semi structured interviews with selected members from the cohort was carried out, based on the themes identified. These interviews allowed a greater understanding of the themes raised and a qualitative approach was employed to better understand the interviewees perception of the differing health and safety cultures within the retail forecourt industry.

Original data was collected from primary sources, these being the relevant health and safety regimes in place for working within the retail forecourt industry, this data was collected during the literature review phase of the research.

Secondary sources of information was sourced from the contractors. The information provided allowed the researcher, to identify how the contactor adheres to the various health and safety cultures that they are forced to comply with and whether this additional burden could be alleviated by the findings of the research study.

Permission to use primary sources was sought from relevant authorities prior to use and all information other than Shell/BP/Esso has been anonymised within the final thesis.

Each respondent to the email provided ethical consent for both the online survey and the face to face interviews (if selected), these ethical consent forms are kept in a secure locked desk

draw within the researcher's workplace and will be destroyed as part of the final preparation of this report, so further ensuring anonymity.

6.0 Validity of the data

Validity is defined as "*the degree to which a researcher has measured what he has set out to measure"* Smith (1991:106) cited in Kumar (2019)

To ensure the data being collected was valid, the data was subjected to face and content validity "*The judgement that an instrument is measuring what it is supposed to is primarily based upon the logical link between the questions and the objectives of the study*" Kumar (2019:272)

Face and content validity is easy to apply to the research instrument. Each question when posed within the research instrument must relate to one of the objectives of the research, if the link is established between question and objective then this can be deemed to support the validity of the instrument, as stated in Kumar (2019:272) "*The greater the link, the higher the face validity of the instrument"*.
The questions within the research instrument must cover all the attitude's that the instrument is designed to measure.
Content validity: "*is also judged on the basis of the extent to which statements or questions represent the issue they are supposed to measure*" Kumar (2019:272)

What must be considered is: "Although it is easy to present logical arguments to establish validity, there are certain problems:

- The judgement is based upon subjective logic; hence no definitive conclusions can be drawn, different people have different opinions about the face and content validity of an instrument
- The extent to which questions reflect the objectives of a study may differ. If the researcher substitutes one question with another. The magnitude of the link may be altered. Hence the validity or its extent may vary with the questions selected for an instrument." Kumar (2019:272)

The data collected during the research study project has been tested using face and content validity, the questions were posed to the cohort by the researcher linked to the aims and objectives of the study project and examined to ensure all topics were covered and all the data collected was deemed relevant to the study project.

6.1 Reliability of the data

Reliability of the data is defined as "the extent to which a test or procedure produces similar results under constant condition in all occasions" Bell & Waters (2018:140)

To test the reliability of the research instrument developed as part of this study, as a researcher two questions must be posed and answered:

- How reliable is the instrument?
- How unreliable is the instrument?

The wording of the question used in the online survey and during the interview process, based on survey results, were phrased to give either a positive or negative response, leaving no potential ambiguity by only allowing either the positive or negative response.

The online survey was delivered by means of a weblink to the cohort during the Local Contractors Safety Council meeting in January 2022 and by further email correspondence with interested parties.

The interviews were conducted online via TEAMS calls with individuals and where possible face to face meetings in a neutral setting, were undertaken, so that the individual did not feel under any external or internal pressure whilst being interviewed.

The interaction between the researcher and the interviewee was particularly important, to ensure the process was adhered to with undue pressure from either party. The researcher personally knows all those who were interviewed and this personal interaction allowed the researcher to pose, phrase questions based on the seniority level of the person being interviewed and their role within the framework of the contract, be it as part of the Project management or Facility management companies members of staff.

As the researcher has this personal interaction almost daily with the interviewees, they were immediately put at ease and were free to offer their opinions on the safety culture developed by Shell over the years, without fear of the information being used maliciously against themselves or their companies. This personal interaction stems from working both as an L3 sub-contractor for 5 years and now as the L2 HSSE manager for the FM company, so having in the words of one of the respondents “been the poacher and now the gamekeeper” for the HSSE culture developed by Shell.

The data collected as part of this research study was subjected to face and content validity, the questions posed linked to the objectives of the study, ensuring that the questions covered the topics that the research set out within the stated aims and objectives.
The research instrument, online survey and face to face interviews was deemed to be reliable as the questions posed within both the online survey and face to face interviews produced similar results.

All data collected during the engagement was collected anonymously and complies with the General Data Protection Regulation 2016/679.

No confidential information has been included in the study.

7.0 Data analysis methodology

As per the engagement strategy, (Appendix B) the online survey was initially mooted to members of the Local Contractor Safety Council in Nov 2021. Potential research study participants made themselves known to the researcher during this event.

The online survey link was emailed out to operational members of the partner organisations in January 2022, along with ethical consent forms for both the online survey and the face to face interviews (as selected).

The survey was developed so that the recipients had to either agree or disagree with the statement or questions posed.

From previous experiences with surveys taken by the researcher as part of a cohort, if the opportunity is given to respondents, to answer N/A many answers would be returned neither agreeing nor disagreeing, which renders the data collected less effective.

The following scoring matrix was used to analyse the data:

Response type	Score
Strongly agree	4
Agree	3
Disagree	2
Strongly disagree	1

Scores between 3&4	Scores between 2.5&3	Scores between 2&2.5	Scores between 1&2
This shows a consensus across the cohort of strongly agreeing with the statement/question posed to them.	This shows a marginally positive response to statement/question posed and would indicate that opinion is divided across the cohort but leaning towards agreement with the statement/question presented to them.	This shows a marginally negative response to the statement/question posed and would indicate that opinion is divided across the cohort but leaning towards disagreement with the statement/question presented to them.	This shows a consensus across the cohort of strongly disagreeing with the statement/question posed to them.

When analysing the responses, the average scoring across the themes was compared. This allowed general focus areas to be identified across the supply chain.

Within each of the themes, the individual responses to the questions were assessed to identify any specific sensitivities resulting from the statements/questions posed.

7.1 Data sampling and analysis

In order to sample and analyse the data collected during both the online survey/questionnaire and the interview process a number of steps were taken.

Step 1. The data needed to be organised and prepared for analysis. This involved collating the data from the online survey/questionnaire, transcribing the interviews and data collected during onsite visits to live working sites where observations were carried out.

Step 2. All the collected data was read, this gave the opportunity determine the general themes or consensus from the cohort.

Step 3. Coding of the data, where the data is broken down into chunks and labelled with a term

Step4. Themes generated, using the coding to generate themes or descriptions

Step5. Representing the description and themes, this detailed how the description and themes were to be represented in the narrative. (Cresswell) 2016

Once the results of the survey were collated using the research instrument, the data was sampled using a mixed sampling approach.

This approach was deemed suitable as the framework for the study population was a known factor i.e. working on the retail forecourt estate, from these intervals were developed based on job title, experience, and knowledge.

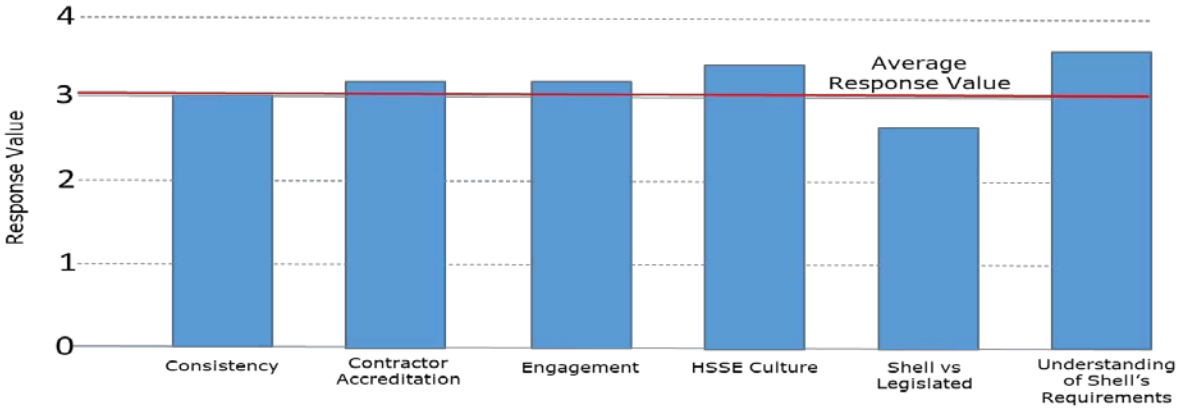
This led onto convenience sampling, guided by easy access to the study group for both the online survey and face to face interviews, as well as expert sampling, with the cohort being of longstanding employment in the retail forecourt industry and therefore considered to be industry experts in the field of project and facilities management for the Shell estate.

8.0 Results and discussion

8.1 Survey results

Comparison of key themes.

As identified within the sections above, the survey was split into key themes, as shown below:



As can be seen, across the key themes identified, the understanding of Shell's requirements and HSSE culture were the sections which generated the highest response on average, followed by Engagement.

Furthermore, Shell V Legislated and Engagement created the largest variance of responses across the key identified themes and the lowest score in the case of Shell v Legislated, which has delivered scores of 2.53 and 3.15 respectively.

These scores have been generated using a balanced mixture of positive and negative responses.

8.2 Understanding of Shell requirements

The average score across this theme was 3.5, which was marginally the highest score produced by the study.

Participants who completed the research online study, shared the view that the processes and requirements that Shell have implemented were understood, why they were in place and what is expected from the contractors when applying the processes and requirements.

Scores of 3.6 and 3.8 respectively showed a very positive response to these questions.

During analysis of the data it became clear that these questions posed to the participants, show that as a supply chain Shell's Philosophy and HSSE culture has been bought into by those who work on the retail forecourt estate.

It would be expected that the supply chain would be very receptive to any changes that are required during the changes to processes and requirements being brought into the existing culture to dispel the culture of fear as fostered by previous Shell management, towards the culture of learning being developed now.

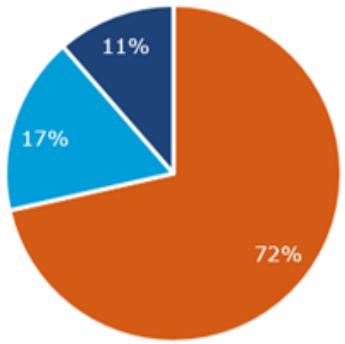
The final question posed in this section of the online questions was based on access to personnel within Shell to clarify any questions regarding processes and systems that need to be implemented/used.

The score for this question was significantly lower than the others within the same section (2.9). This score indicates that there is a feeling within the supply chain that engagement with Shell could be improved and the score suggested that this area maybe explored in more detail in a later study.

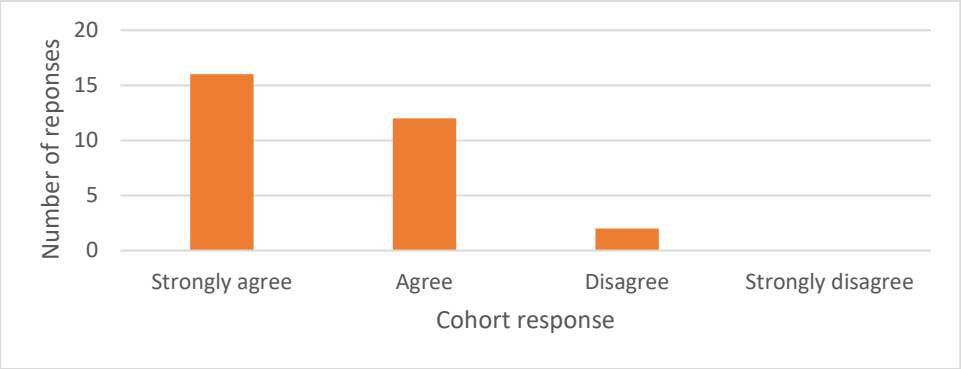
When sampling the data more closely, it was noted that the spread of scores was generally positive, however those that delivered a negative response, were typically strong in this view point, which significantly affected the overall score received for this question.

8.2.1 I consider my role to be:

- Senior management/Contractor management
- Manager site based
- Operational/frontline staff

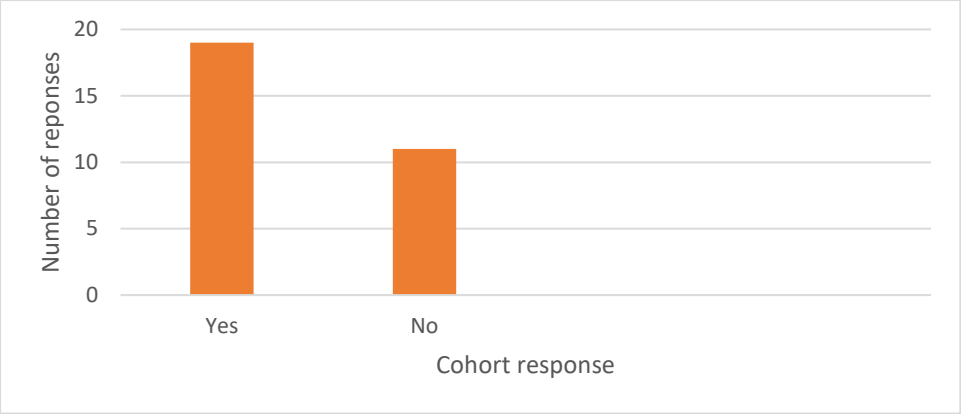


8.2.2 I understand Shell's systems and processes:

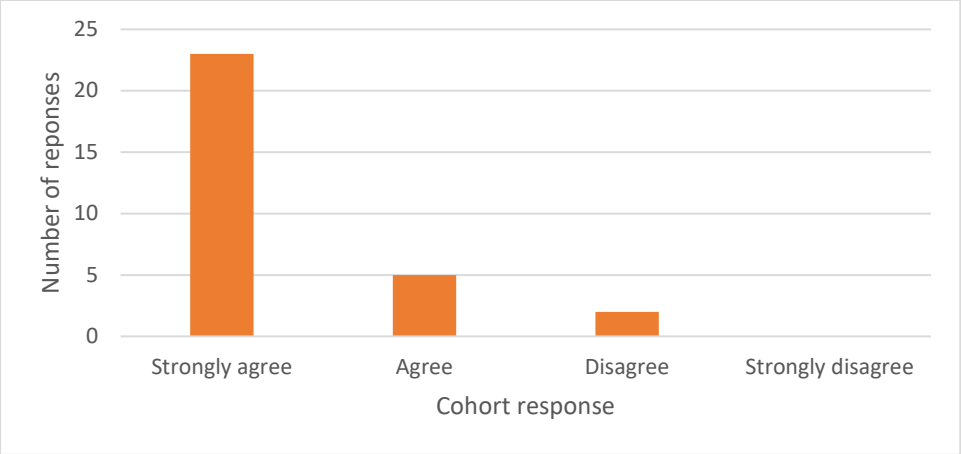


Result showing a strong agreement with the statement

8.2.3 I understand why they are in place and what they are trying to achieve:

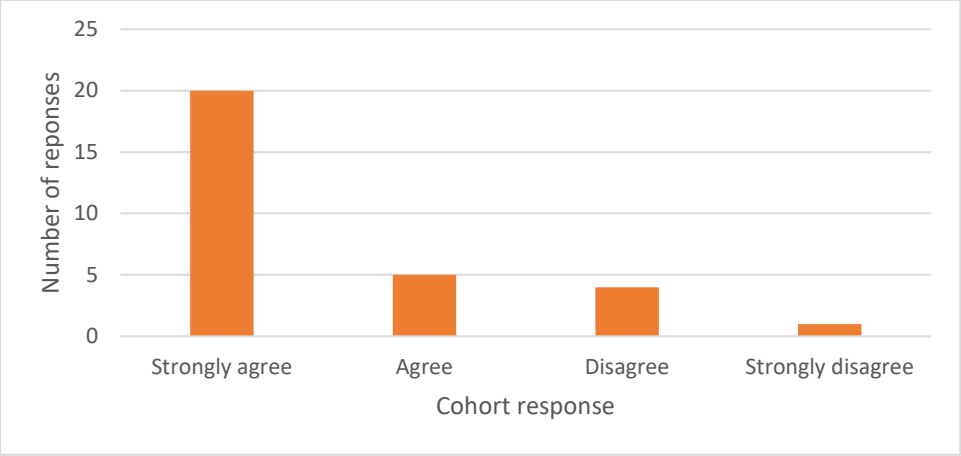


8.2.4 Shell clearly define what they expect of me and I am always certain of what is required:



Result showing a strong agreement with the statement

8.2.5 I have access to personnel within Shell who can clarify any questions that I have in relation to the implementation of their processes, systems, and expectations:



Result showing a slightly strong agreement with the statement

8.3 HSSE Culture

This section of the survey asked questions on the perceived HSSE culture within Shell.

This Key theme generated the second highest average score across the survey (3.3).

This score indicates that across both the PMC/FMC supply chain the participants share Shell's view that their HSSE culture within the organisation is strong, however improvements can be made to make the culture more robust.

When analysing the data, those questions posed around Shell's approach to managing health and safety aligned to best practice scored highly (3.3) with hardly any variance across the data responses.

The question posed around consistency of the implementation of this HSSE culture provided an unexpected response. Although the scores from the study were in general ranging from positive to strongly positive, those few negative responses were strong in this viewpoint.

This indicated that although as a whole, the contractor's execution and application of the HSSE culture is strong, there are activities, usually conducted by contractors directly employed by Shell, that don't fall within the remit of management from the PMC/FMC teams, fall below the expected standards found across the PMC/FMC scope of works.

This view point is supported by feedback from the interview process and has been collaborated during onsite visits, where Shell directly employed contractors were conducting their tasks, not in adherence with Shell HSSE culture or working practices. It is noted that these contractors were approached by the engineers being shadowed, who intervened and instructed the contractors on their failings and how to mitigate against them.

This was further collaborated when during an onsite visit, the retail manager was seen to be using a 240V electric jet wash system to remove debris from the shop front, in direct contravention of Shell policies and procedures, again the engineer being shadowed intervened and after a brief discussion the retailer turned the jet wash off and "promised" to invest in a diesel powered device, this contravention was communicated to the Shell territory manager, who has direct responsibility to Shell senior management, for managing the retail forecourts within a specified territory, to ensure that the retail does in fact procure the new jet washer.

Shell are currently half way through changing their safety culture from one of "Blame" to a more "Learning from incidents" culture and as such are producing masses of information that is delivered by the L2 partners down to the L3 frontline staff, this is facilitated by safety days and local contractors safety council meetings.

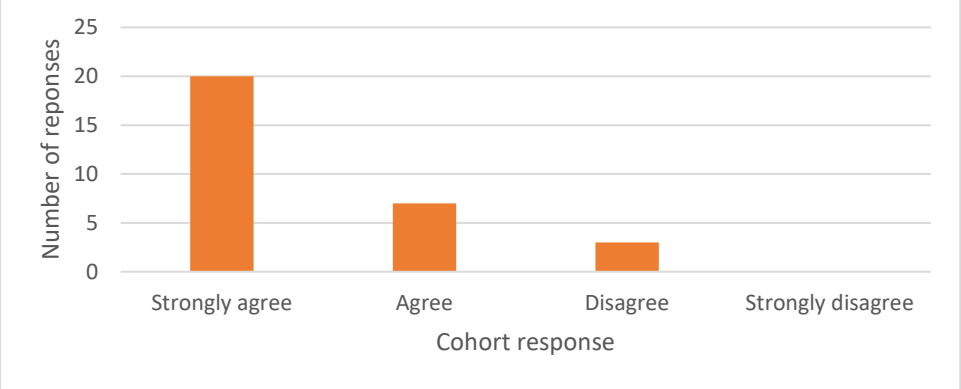
Shell are moving in a 5 year cycle towards a behavioural safety culture, where during the 5 year cycle, various factors that influence people's behaviour on site will be assessed and analysed so that together as partner organisations around the Globe, we can improve safety for all those who work on Shell contracts.

As part of this change the L2 partners have been guiding the L3 frontline staff along the pathway set out by Shell, using such graphics as the safety refresh material below.

Fig 4 Shell safety refresh 2020-2025

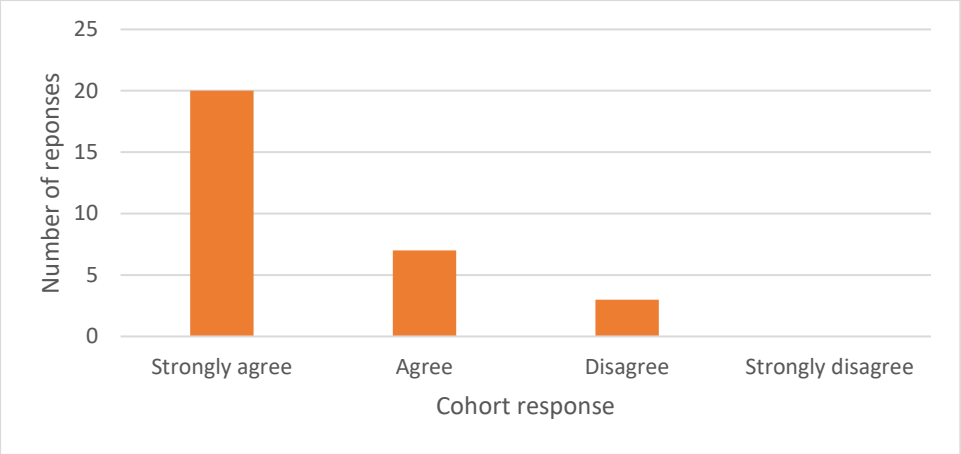
Each session delivered concentrates on one of the segments of the circle, starting with Contractor HSSE management, how does Shell mange the L2 partners and vicariously how do the L2 partners manage the L3 frontline. This journey has started and means a total change of mindset for all from Shell down to the engineer at the frontline, hence the 5 year cycle to fully embed this change.

8.3.1I feel that there is a definitive health and safety culture within Shell, and we get a consistent message whichever site we work on:



Result showing a tendency to lean towards a strong agreement with the statement

8.3.2 I feel that Shell's approach to managing health and safety on their sites is seen as best practice within the industry:



Result showing a tendency to strongly agreeing with the statement

8.4 Consistency

Within this section of the online survey, there were varied responses to the questions asked.

Overall, the general theme scored 2.9, which shows a marginal trend towards the strong positive response. When analysing the data of the individual scoring of questions, the responses tended to show the greatest amount of variance of any of the key themes within the online survey.

Over the nine questions posed within the survey, scores ranged from 2.5 to 3.3, this gives a strong indication that although the respondents perceive that Shell is getting most things right, there is a definitive scope for improvement within specific aspects of their consistent approach.

The strongest generated score from this section of the online survey, was around Shell requirements being suitable, sufficient, and appropriate to the activities being undertaken by the contractors, go above and beyond expectations (3.3). As seen from other sections within the online survey, contractors' feelings towards Shell requirements are generally positive. Any negative responses provided in relation to this question were marginally negative as opposed to having a strong negative response. This would indicate that nay measures that Shell put in place to improve this aspect further would be met favourably and bring about a fundamental change requirement.

The weakest score within this section of the online survey was associated with the following question: -

"I feel that Shell are easy to work with and/or for"

This question gave a score of 2.5, which is the lowest score recorded across the whole survey.

When the data was analysed there was a definitive split between those respondents working for the PMC and FMC side of the contract. PMC respondents seemed to have elements of negativity around working for Shell, whereas the FMC respondents had a generally more positive view of working for Shell.

This negative view point from the PMC side of the contract was unexpected as the PMC contractors are longstanding suppliers of contract services to Shell. When analysing the data, it became apparent that responses that lean towards either end of the scoring spectrum tend to indicate the respondent has a sensitivity towards the question being posed.

The responses indicate that this may be a legacy issue which any corrective actions have been perceived to be unsuccessful by the respondents; or that this is a previously known issue that has yet to be fully addressed by Shell in respect of the supply chain partners/contractors.

This split will be investigated more during the interview process, to determine if the negative aspects from the PMC side comes from the approach and timeframes that are applied from Shell towards project management.

The interpretation of the data analysed is supported by the feedback provided by the respondents for other responses within this section of the survey.

Questions based around Shell's requirements when compared to the activities being undertaken and whether the contractors are happy to go above and beyond expectations have the strongest scores (3.3 for both). Within each of the questions posed, any negative responses were marginal at best and the overall variance in the responses was small when compared to the data set as a whole.

The responses given, do demonstrate that the supply chain partners/contractors are committed to Shell and that they are more than willing to accommodate Shell current and potentially future requirements. This message runs concurrently across several the responses and key themes in the online survey.

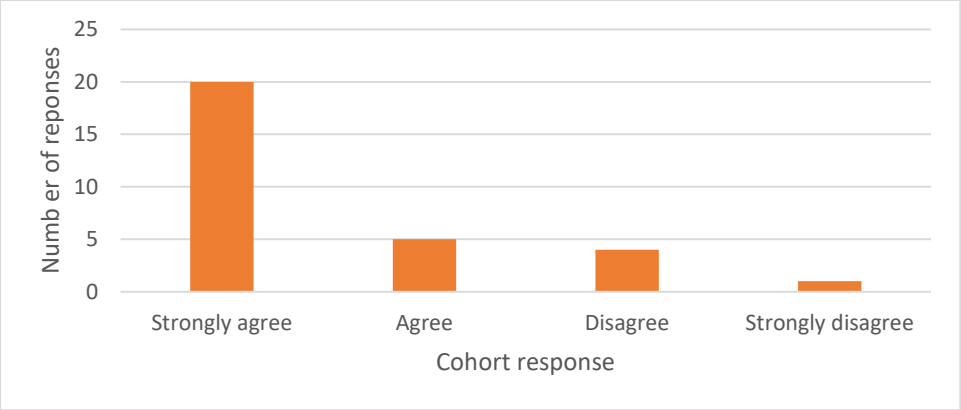
During the analysis of the data within this section, the responses concerning the expectations of Shell being excessive of other retail forecourt providers in the industry, fell below the average for this theme.

69% of responses to whether Shells systems take more time to comply with (than others in the industry) agreed. This data set indicates that there is a general feeling across the supply chain partners/contractors, that to fully comply with the Shell system requirements, more time is required on site, completing paperwork rather than completing the given tasks.

When compared to other retail forecourt provider in the UK marketplace, Shell's processes and procedures are being more onerous and time consuming on a day to day basis.

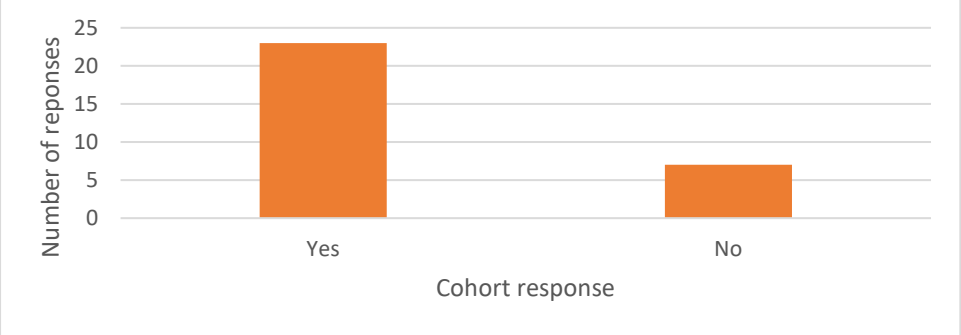
This outcome was to be expected, considering the HSE culture developed over time by Shell and their position within the retail forecourt industry as being perceived as having best practice, therefore it would be a logical assumption that the processes and procedures developed, would come with a greater administrative burden and time to comply.

8.4.1 When I work on site, I see all contractors and Shell employees are asked to follow the same procedures and systems as I am:

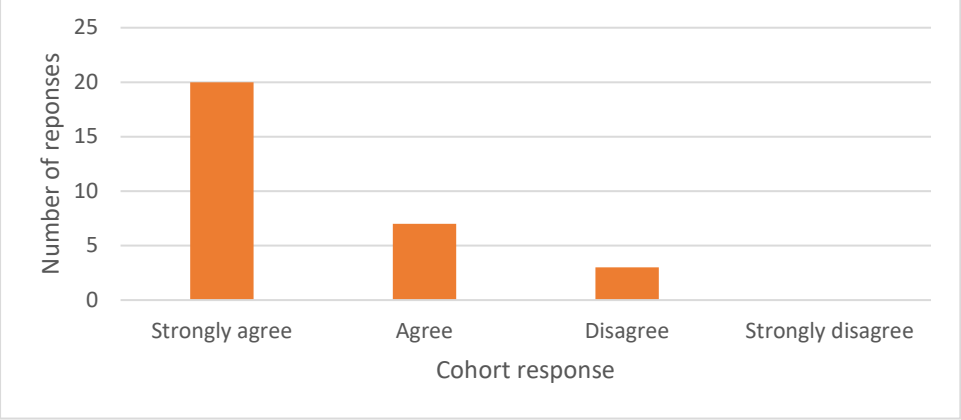


Result showing a slightly strong agreement with the statement

8.4.2 Do your activities on Shell sites require extra time to comply with their systems?

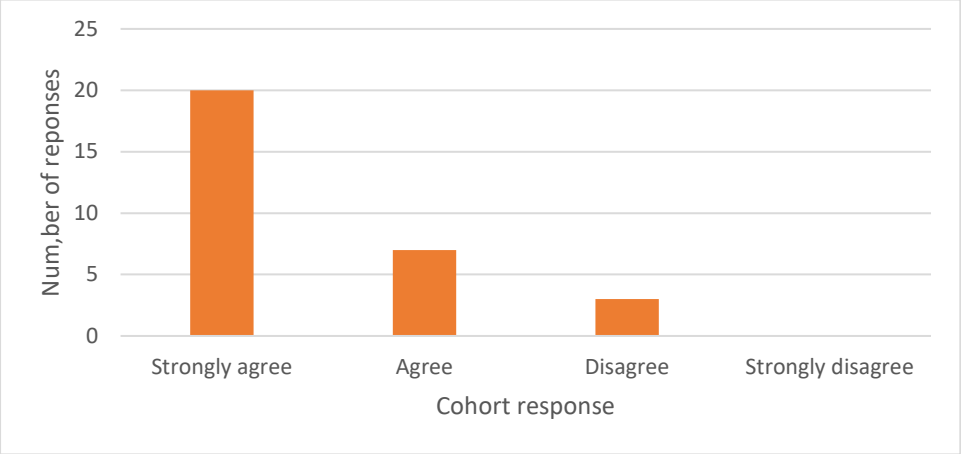


8.4.3 I feel that the requirements of Shell are appropriate for the activities that I undertake



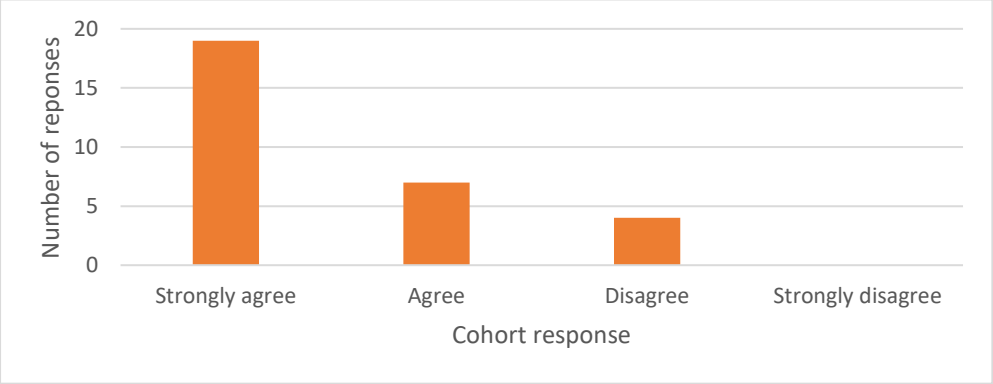
Result showing a lean towards the strongly agreement part of the statement

8.4.4 Are there differences in the approach?



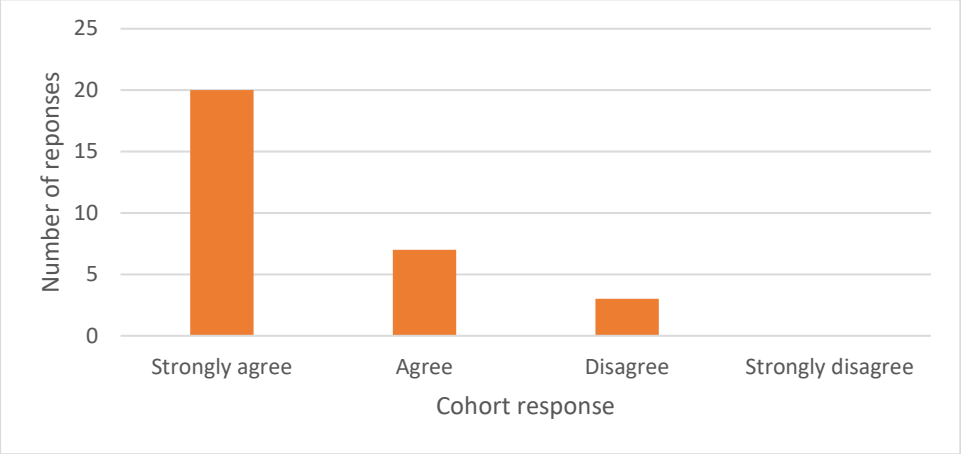
Result showing a lean towards strongly agreeing with the statement

8.4.5 Expectations placed on me by Shell are the same as those placed on me by other similar organisations



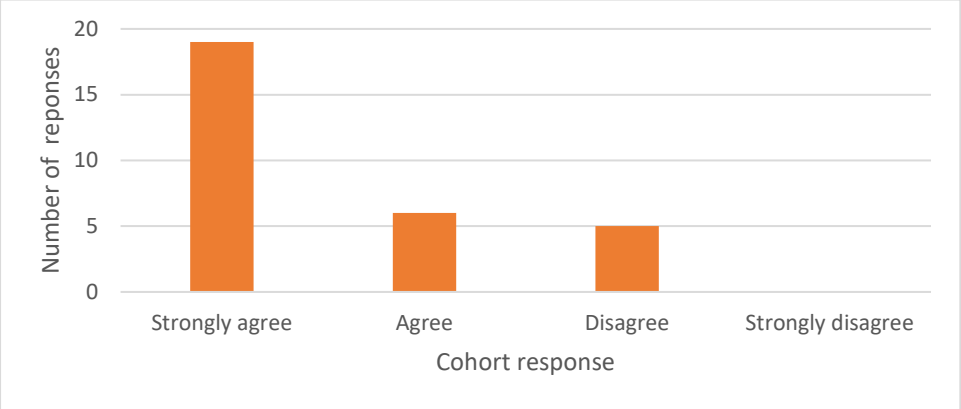
Result showing a tendency to lean towards strongly agreeing with the statement

8.4.6 I feel that my organisation goes above and beyond the expectation placed upon me by Shell



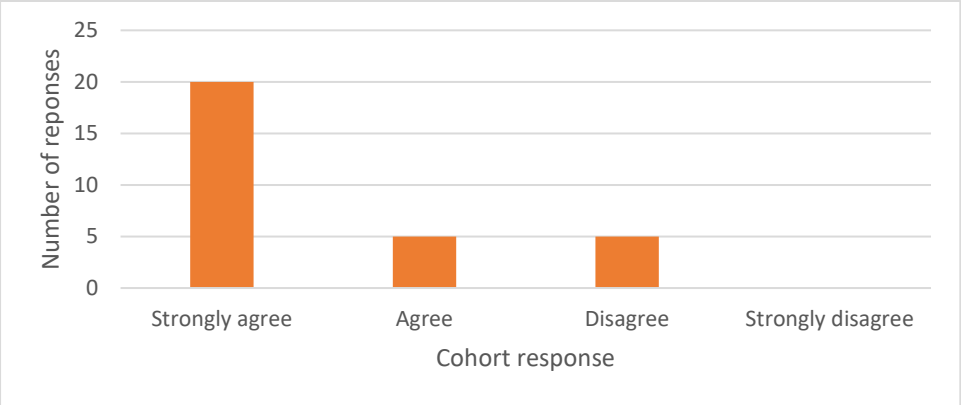
Result showing a tendency towards strongly agreeing with the statement

8.4.7 All contractors involved clearly understand the expectations placed upon them by Shell



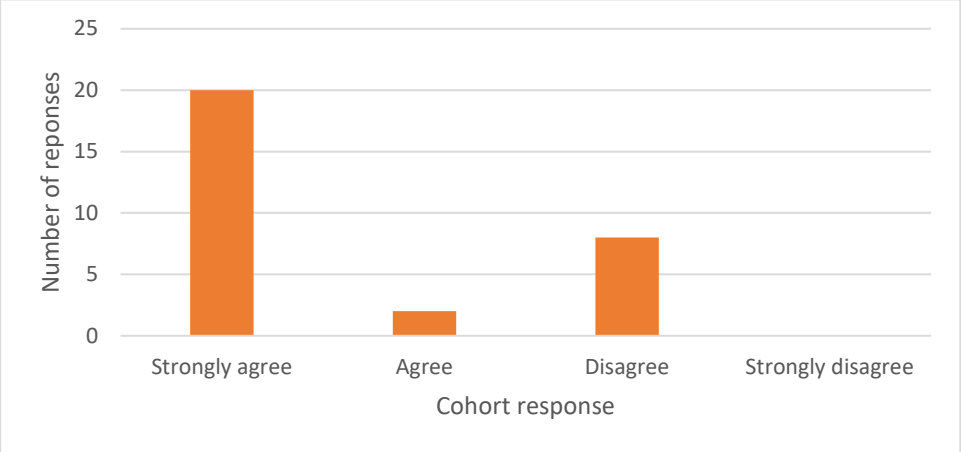
Result showing a strong response to the statement

8.4.8 All contractors are happy to accommodate and comply with these expectations



Result showing general agreement with the statement

8.4.9 I feel that Shell are easy to work for/with



Surprising result showing a slight disagreement with the statement

8.5 Engagement

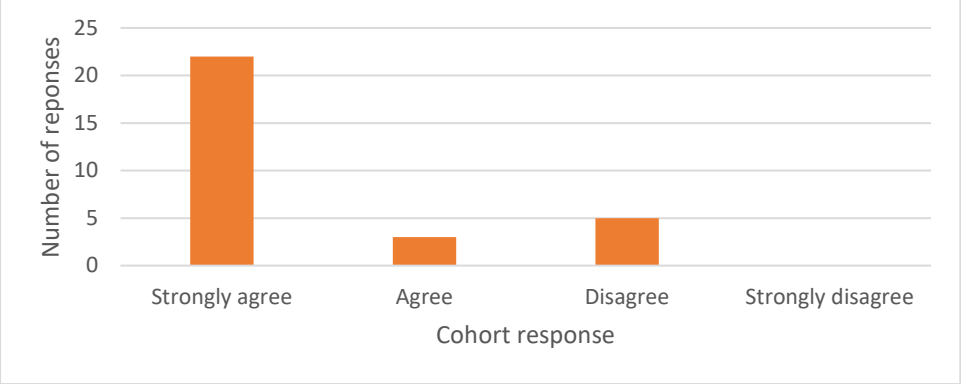
Within this section of the survey, the average score across the key theme was 3.1, which was marginally above the average as a whole. The responses for this theme showed little variation across the questions posed, with scores in the theme ranging from 2.8 to 3.0.

The lowest scoring question within this sections theme was concerned with being made aware of changes before they are enacted and the ability for the contractors to potentially influence changes before, they are mandated (2.8), with the highest score (3.0) being associated with clarity of the message being delivered from Shell, when required.

The score across the theme, which represented the greatest variance within the responses, was the question asked around the opportunity to participate in influencing change. The average score for this question was 2.8, which is an overall positive result, however when this question data set was subjected to individual investigation, there appeared to be a large proportion of the responses at either end of the scoring spectrum. This clearly indicates that where contractors/supply chain feel that they have the opportunity given to them to deliver input to potential changes, then this facility is positively received by them. Where there is a perception that this opportunity is not given, it generated a strongly negative response.

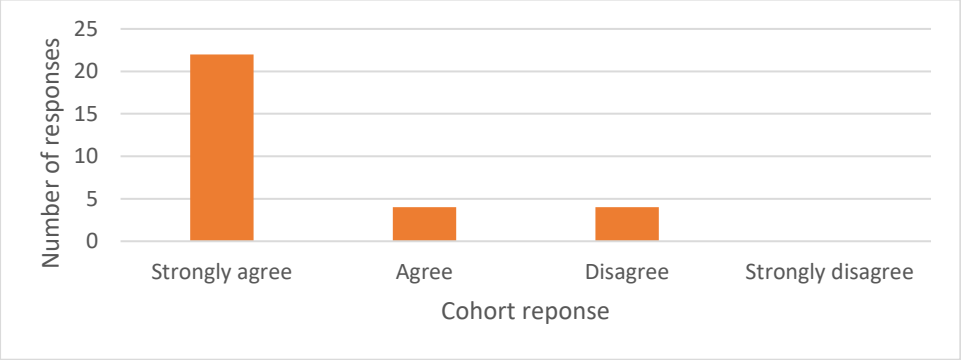
One of the strongly positive messages that has been given as responses by the contractors/supply chain during this section, is their commitment to ensuring safety on site, with 95% of responses indicating that the contractors/supply chain, would have no qualms in engaging with others working on the retail forecourt estate, if said contractor was falling short of the HSSE requirements and expectations. This was also seen in person during site visits.

8.5.1 Any changes to systems and procedures are clearly communicated prior to being implemented



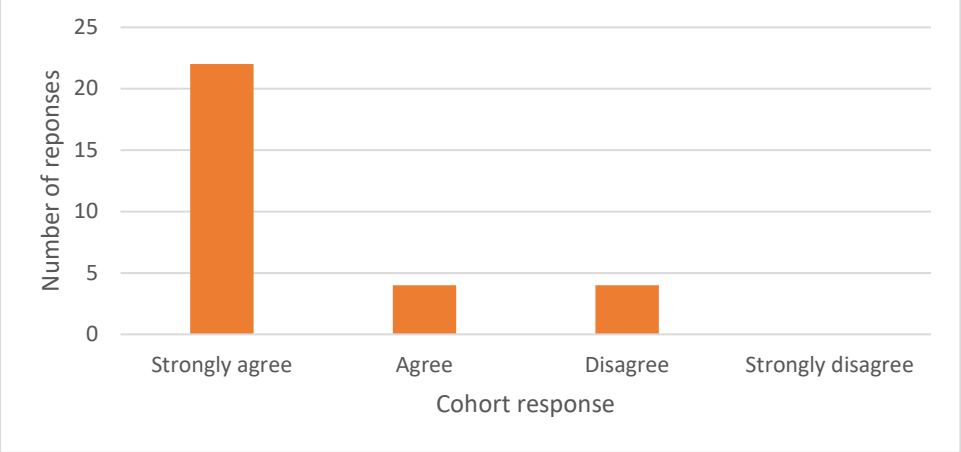
Result showing an agreement with the statement

8.5.2 I feel that I am aware of changes before they are realised



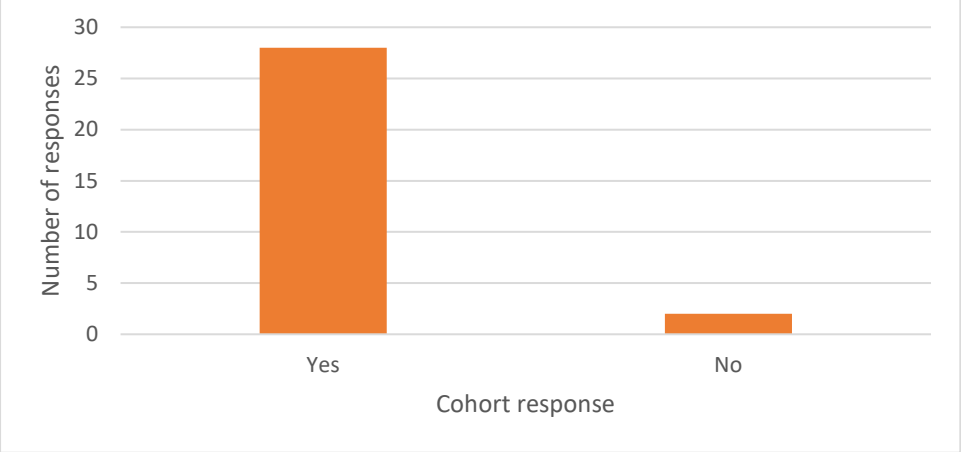
Result showing a slight agreement with the statement

8.5.3 I feel that I can participate in influencing changes



Result showing a slight agreement with the statement

8.5.4 Would you feel comfortable stopping works where HSSE procedures have not been followed correctly but the risk has been mitigated?



Result showing a strong agreement with the statement

8.6 Shell v Legislated

Across this key theme the average score was 2.5, indicating a slightly positive response to the questions posed overall.

When subjecting the data within this theme to analysis, several observations were made.

When the question posed asked whether there was a difference between what is expected/required by Shell and what is expected/required legally, the range of answers were generally marginal responses, with the majority giving scores of either 2 or 3 (marginally disagreeing or agreeing with the question), this scoring tends to indicate, that although there may be some additional requirements expected from Shell, the general agreement is that this is limited and not wide scale across the delivery model.

The question scoring the highest mark within this theme was concerned with the question of whether the Shell system could be consolidated. The responses to this question generally fell within the strongly agreeing category at a much higher frequency and numbers than other questions within this theme. This would indicate that there is a strong feeling within the contractors/supply chain that there are changes that can and need to be made by Shell.

Within this section there were several yes/no questions asked. There was a fairly even split across these responses regarding the additional requirements that are only Shell specific, with a number of these responses indicating that there are. This data is not to be perceived as a negative or positive, but it does reinforce the original assumptions of the researcher, that Shell processes and procedures do indeed create an additional resource requirement, often not factored in, when planning works or indeed proposing the costs for the works in question.

Within this section of the survey, there was an opportunity to provide free text feedback as a response. The question posed to the respondents was to identify what additional requirements Shell has over statutory legalisation or others within the same retail forecourt industry. Within these responses several interesting pieces of feedback were received.

The initial data trend identified that there were a number of responses specifically aimed at the Shell retail permit to work system, with the main issue being that the contractors on site were not able to self-certify the permittable works, with the requirement from Shell as part of the permit to work system of a permit issuer not being allowed to be part of the work party, to ensure a fresh set of eyes appraise the works and measures to mitigate risks to health and safety before the permit is issued to the permit holder. There is a specific permit issuer/permit holder course that has to be completed (online or in person) and only then can the employee be deemed to be wither a permit issuer/holder or both. Also permits cannot be issued remotely, placing a further burden on the contactors/supply chain, having another employee attend site, just to issue a permit, this often leads to long journey times and extra financial burdens to the contractors/supply chain.

Due to the nature of the works undertaken by the FMC (Vinci) contractors/supply chain, this is unsurprising, that this issue has been identified, given that teams working on site tend to be small and the permittable works tend to be of short duration.

For the PMC (Artelia) works, which tend to be large scale, forecourt closed types of construction works, there could be multiple permits required daily, all running at the same time, as it would be expected that multiple site activities would be completed and that a

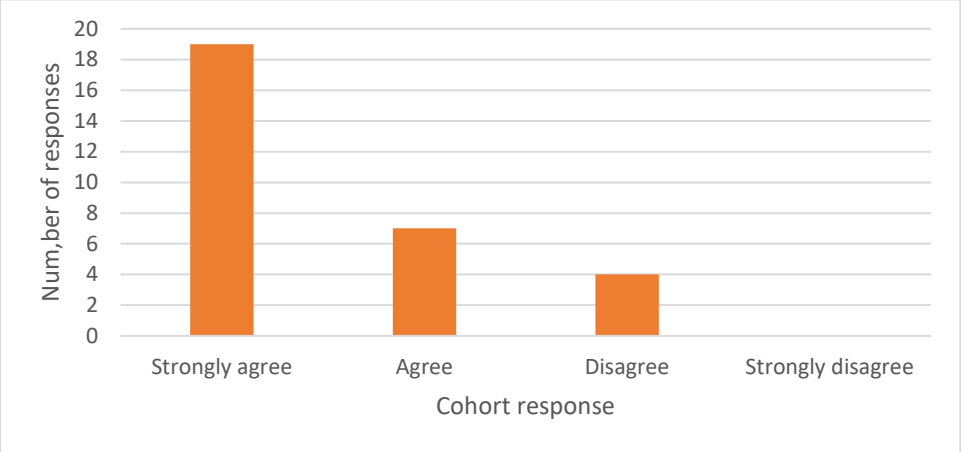
supervisor or managerial permit issuer would have to be in attendance to issue permits on an as required basis, irrespective of the works being carried out.

There was a highlighted disconnect between the safety standards of the supply chain/contractors and those who are procured directly by Shell, so not managed by either PMC or FMC contracts providers, this discrepancy was identified a number of times within this section of the survey. This has been supported by feedback received during the interview processes and by the researcher during onsite visits.

The main disconnect is in the application of the standards concerning PPE wearing on site and provision of JHA's for the work being undertaken.

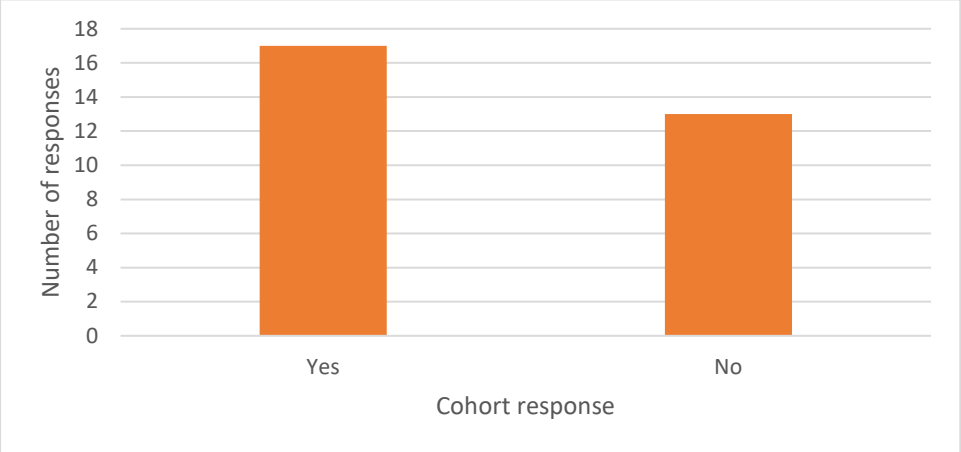
These disconnects or discrepancies are raised as Near misses/Potential Incidents and are communicated back to Shell on a monthly basis, so far to no avail in changing the way these directly employed contractors work.

8.6.1 There is a difference between what is required legally and what Shell requires me to do



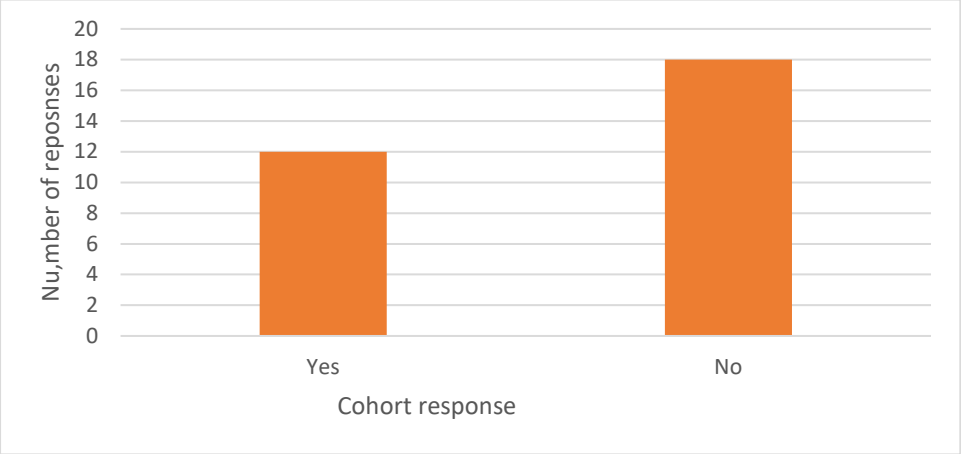
Result showing a general agreement with the statement

8.6.2 Do you believe that the legislative requirements are adequate enough to maintain a safe site?



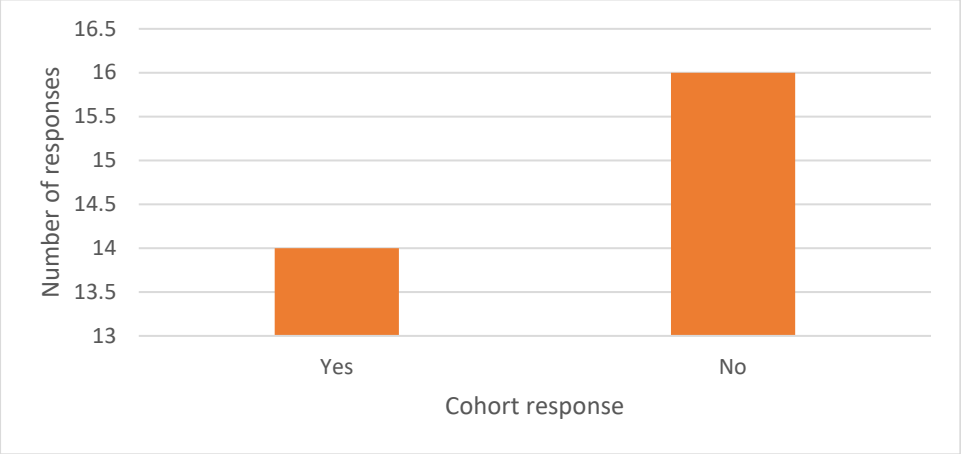
Result showing a slight agreement with the statement

8.6.3 Are you aware of any Shell documentation which is in conflict with the legislation?

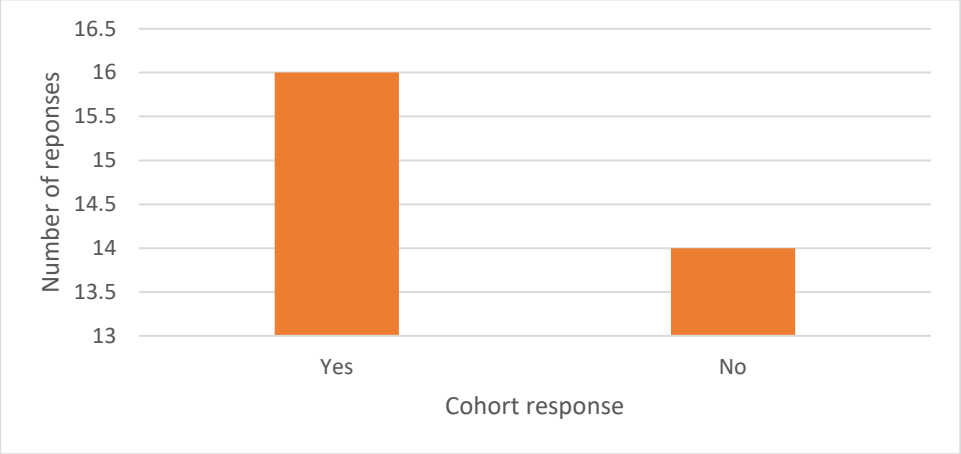


Result showing there is no conflict with legislation

8.6.4 Has Shell's requirements added complexity and duplication of the legislative requirements?

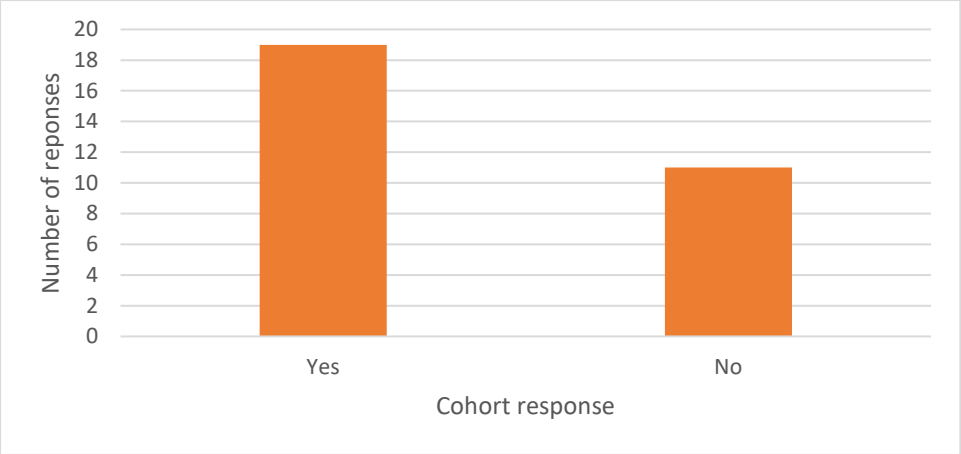


8.6.5 If so, can this be consolidated and/or avoided?



Result showing slight agreement with the statement

8.6.6 Are there additional requirements that are specific to Shell? e.g. recording near misses and potential incidents, Last minute risk assessments (LMRA) etc.



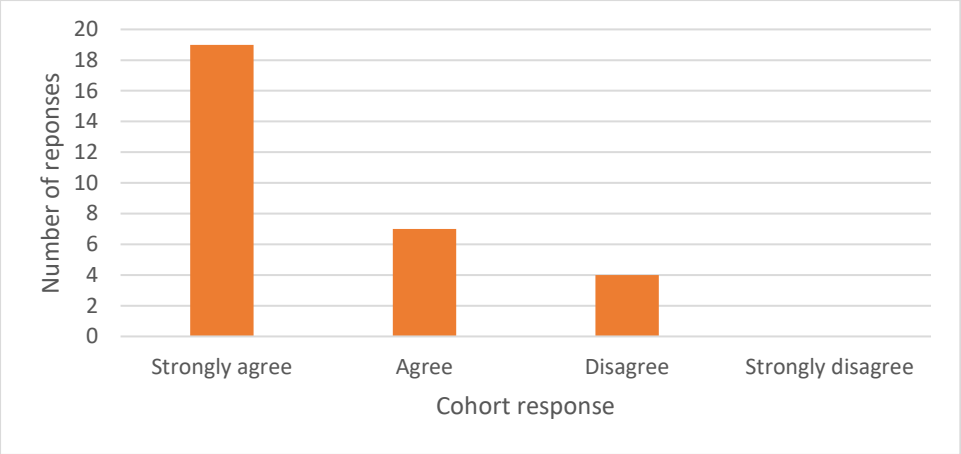
Result showing slight agreement with the statement

8.6.7 If so, can you describe them? Free text speech in the survey

(Note any spelling mistakes have been corrected to ensure ease of reading and a single answer of N/A has been removed)

Shell golden rules
Last minute risk assessments (LMRA) is old hat. We want our staff to continually strive for a risk free environment
The permit to work system having additional site visits to issue a permit, can cause unnecessary driving and the associated risks involved, which is more likely to be of a more significant risk than the permit is to be issued for.
I believe a review of the permit to work system is overdue, technology has moved on and there is potential to employ wearable technology to “show” hazards and risks on site instead of a permit issuer attending every site
Shell’s own paperwork, levels of PPE, certain rules, permit issuer not able to be part of the work crew
We report near misses and the scorecards do not reflect this input
3 hazard spots per day
WCF/JHA for tasks, why not just RAMS which have to be produced anyway
Last minute risk assessments (LMRA)
Requirement for JHA’s
Shell require a monthly report detailing NM/PI’s TBT etc
Retail permit to work system, JHA instead of RAMS, no petrol powered equipment on site but petrol powered vehicles filling up every minute of the day
Hot works/confined space
CEI
Permit to work system unique to Shell
Shell PTW system outdated
Using Shell paperwork which is less comprehensive than ours and duplicates what we currently have in place
More acceptance of digital paperwork as opposed to carrying and writing numerous forms out daily

8.6.8 Can the Shell system be consolidated in some areas to meet legislated and Shell requirements into one set of documents?



Showing a general agreement with the statement

8.7 Contractor accreditation

This key theme delivered an average scored of 3. Within this section there were several closed (Yes/No) questions posed, to establish a baseline feeling across the cohort.

Some of the strongest responses to the questions related to the preparation of the HSSE plan for the works to be undertaken and whether Shell's expectation exceeded the industry norms (approx..72% of respondents agreed this is the case). When asked if complying with Shell's expectations and requirements meant that extra time was required to prepare the required paperwork/documentation (compared to others in the industry) 58% of the responses agreed that this was indeed the case. 63% of the responses indicated that dedicated resources were required to fulfil the expectations/requirements of Shell.

On a more positive note, 91% of the responses agreed that Shell's approach to accreditation was more than adequate and that similar accreditation processes were implemented in selection of L3/L4 contractors by the L2 supplier.

The responses to the question "I feel that there is duplication of efforts when complying with Shell accreditation requirements" provided some interesting feedback. The range of responses varied widely and when the data was analysed to average the score (2.5), this question generated a marginally positive response (Indicating a slight agreement with the question)

During the survey, participants were also asked if they thought the current system could be simplified and made more efficient and user friendly. 52% of the responses were "yes".

Those that replied yes to this question, were then asked to identify any suggestions of how this could be achieved.

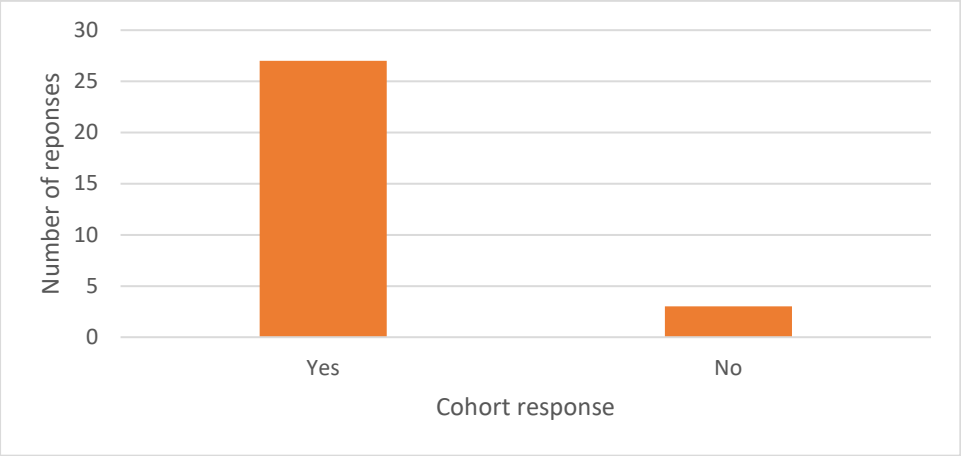
Feedback to this question varied in the responses but the responses tended to centre on the same themes:

- Duplication of paperwork (e.g. JHA/WCF site register) that is driven by Shell
- Paperwork which ids required by the contractor's own procedures/policies and systems of work

- Duplication of auditing and compliance activities when working on both sides of the contract PMC/FMC.

As PMC/FMC sides of the contract are fundamentally different in scopes of work, there will be some L3/L4 contractors who work on the PMC side who will not be qualified to work on the FMC side (closed site PMC as opposed to open and trading FMC), those who do work across both PMC/FMC sites have to abide by two different sets of auditing and compliance procedures and as yet there is no agreed process that satisfies both parties in respect of this duplication.

8.7.1 Is Shell's approach to accreditation adequate?



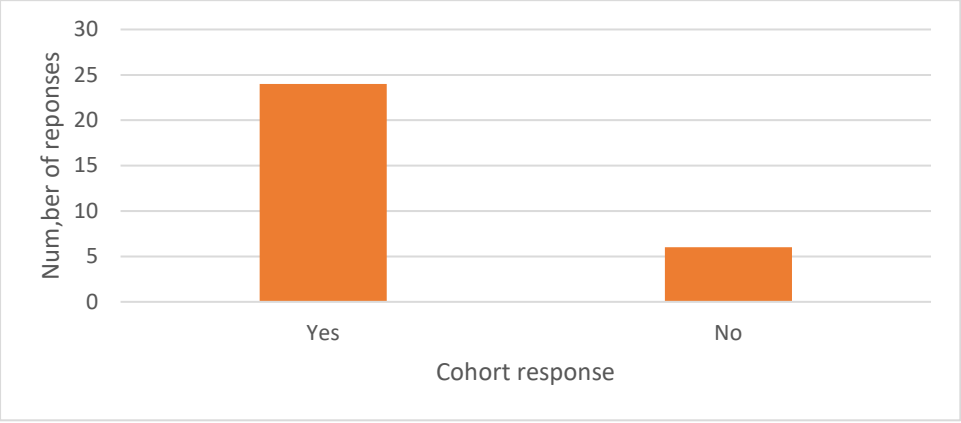
Result showing general agreement with the statement

8.7.2 If not, are there further requirements needed, please specify. Free text speech in survey

To reach standardisation across the industry
Accreditation of retail staff required and those directly employed by Shell to work on the estate
*No consistency- sites allowed to employ own contractors, who have been stopped on site for not working safely**

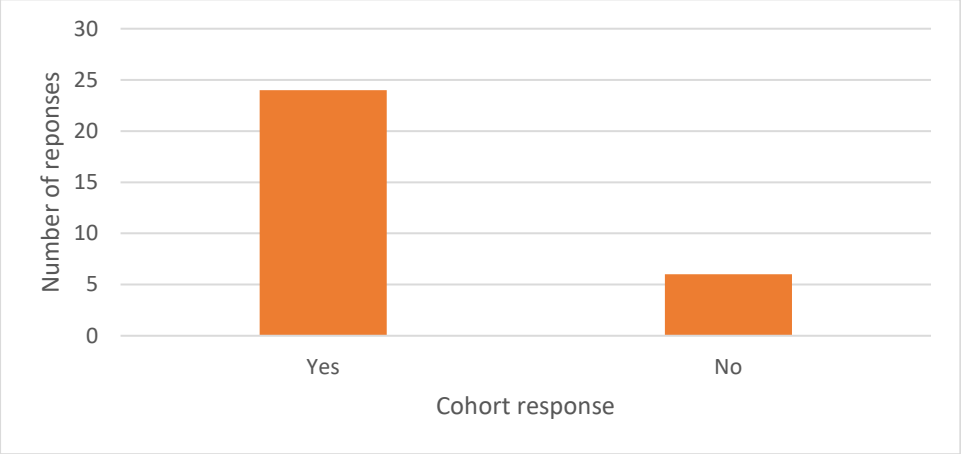
*This was addressed during interviews as certain sites (DODO) fall outside the scope of Shell influence in respect of HSSE

8.7.3 Do the L3 contractors follow a similar accreditation process to the L2's when pre-qualifying L4 contractors?



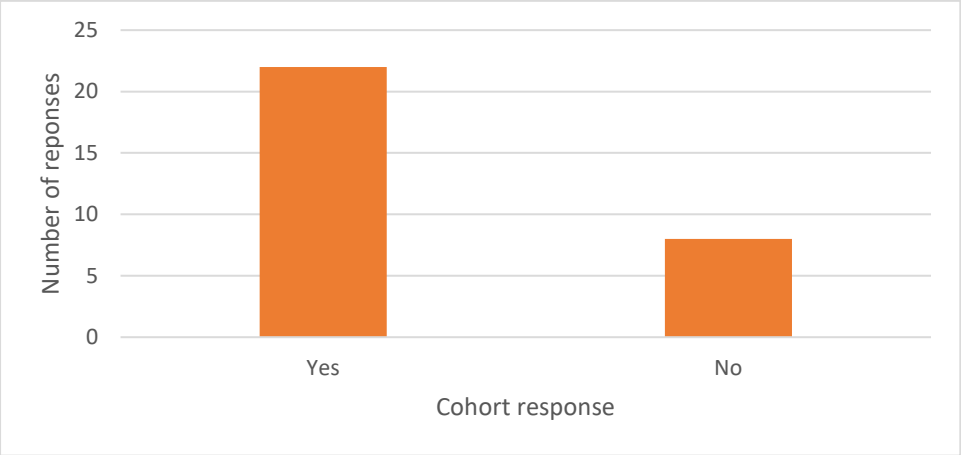
Result showing general agreement with the statement

8.7.4 In the preparation of your HSSE plan, does Shell's HSSE specification exceed industry norms?



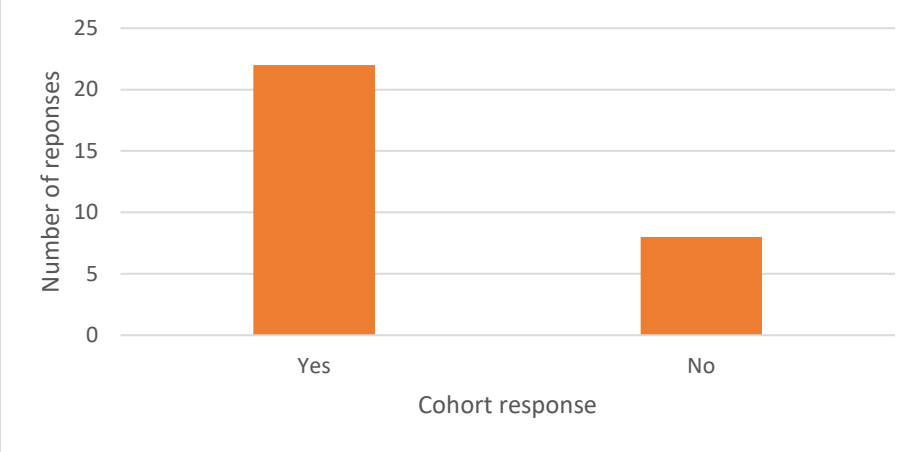
Result showing general agreement with the statement

8.7.5 Is Shell's competency criteria for persons signing off permit to work in excess of the industry standard?



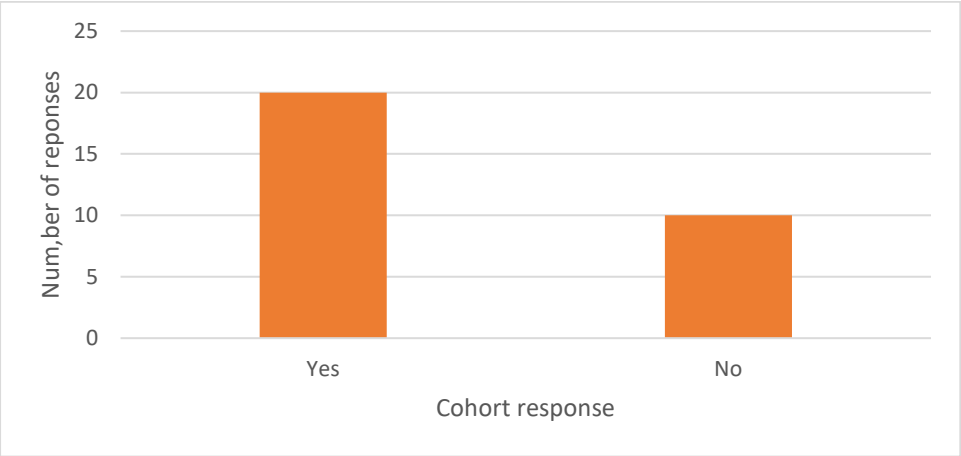
Result showing general agreement with the statement

8.7.6 Do you find it necessary to spend more than the average time preparing documentation for a Shell project comparative to similar works for other organisations?



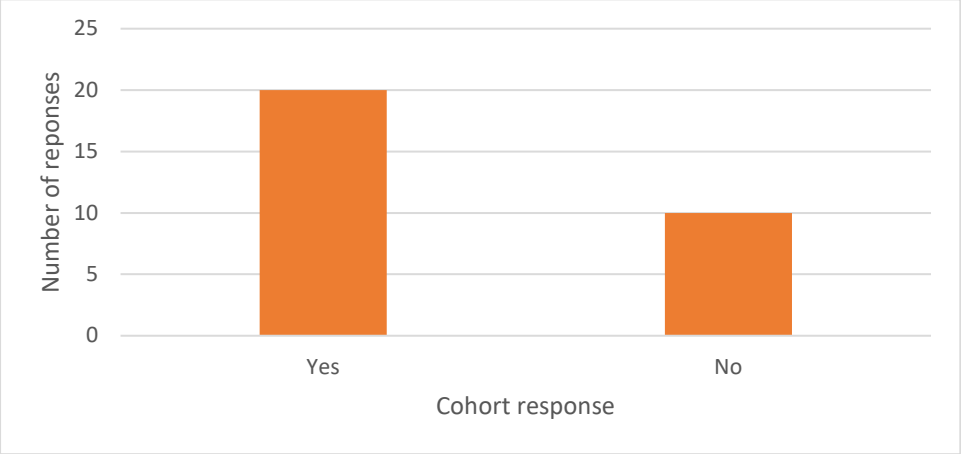
Result showing general agreement with the statement

8.7.7 Do your L3 contractors employ dedicated resources to meet Shell's HSSE requirements? Hint/tip: Are these resources required for similar projects or only in the case of a Shell project?



Result showing general agreement with the statement

8.7.8 I feel that there is duplication of efforts and activities when complying with Shell's accreditation requirements



Result showing general agreement with the statement

8.8 Qualitive questions

The recipients were asked to identify one thing that they thought Shell did well and these results are identified below:

Communicate
Monitor compliance
Sends a clear message understood by all
Share lessons learnt from global marketplace
Talk not tick audits
Lifesaving rules
Shell have a clear set of HSSE standards, which are easy to understand
Regular safety meetings
Focus of HSSE matters
Allowing frontline staff to work with authority
Signage, Clear rules, WCF
Contractor controls
Auditing sites
Reporting of incidents
Permit to work system
A good standard of site safety and security
HSE audits, CBRE passport system, permit to work system
Processes and procedures
Solid HSSE culture
LSR and Golden rules
Consistency of message
NMPI collection and sharing of close outs
WCF separate to our paperwork system
Communication and focus
Clear and concise information and documentation
Safety before profit
Reward and recognition for work well done
Clear instruction on changes

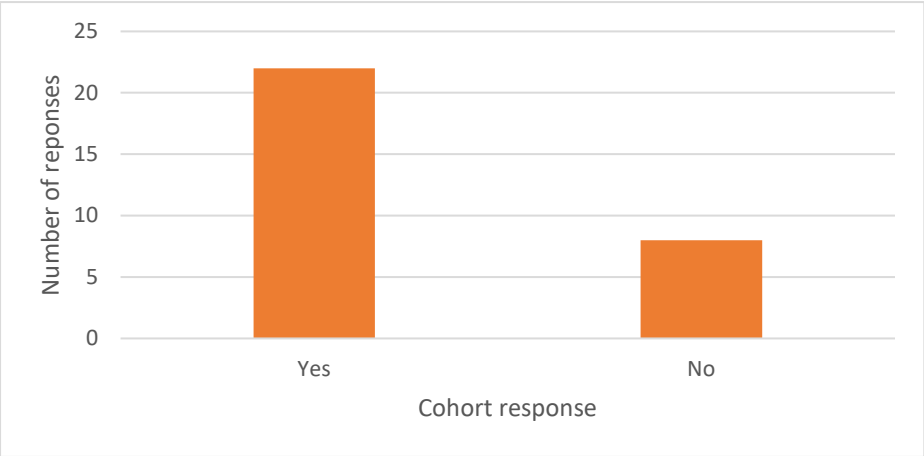
Recipients were also asked the following question: ‘as experts within the industry, what would you approach differently to simplify Shell’s processes without increasing the risk to safety?

The results of the feedback are collated in the table below.

(Note spelling mistakes have been rectified and one N/A has been removed from the results as it bore no relevance)

No great changes are needed
One signing in process instead of two

8.8.1 In short, do you believe that the current HSSE system can be streamlined to eliminate duplication whilst not adding increased risks?



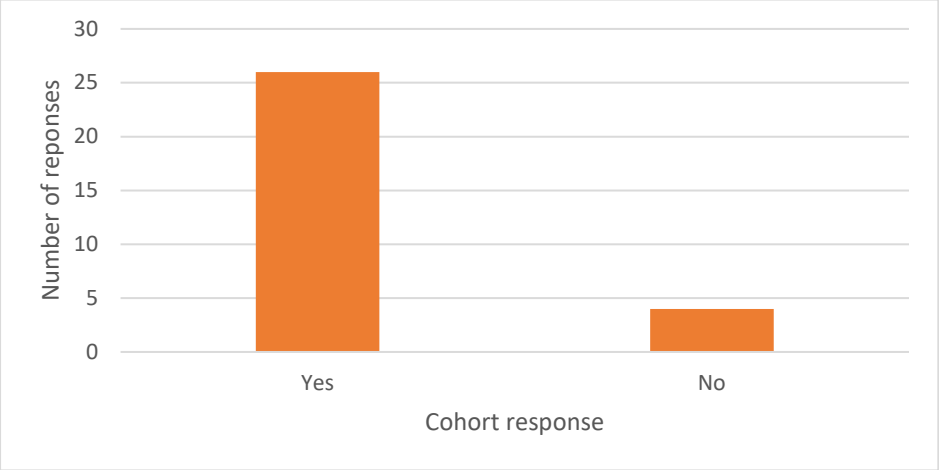
Result showing a general agreement with the statement

8.8.2 If you answered YES, what are your suggestions/recommendations? Free text speech in the survey

(Note: Spelling corrected)

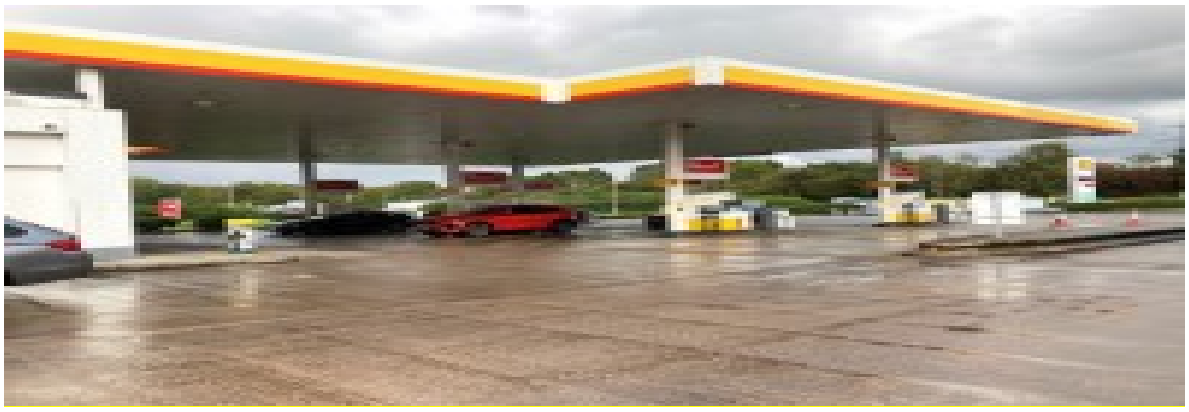
To reach standardisation across industry
Use inspections such as CEI to add to NMPI statistics
Review the need for JHA instead of RAMS
PMC and FMC in the main, use the same contractors, can the audit from one not count for the other as well, especially in respect of the annual office audit
All forms need to be digital
Simplify the paperwork
JHA/RA, could be incorporated into one document, other companies don't recognise the JHA which leads to massive paperwork costs per annum
Review of the PTW issuer/holder roles
Sites need to take ownership of issues and reporting of faults
Update GIDS
GIDS ownership needs to be established by Shell
Reduce paperwork duplication
A more integrated standard across the industry, involving all stakeholders (L1) companies to agree on what is the requirements for working on the forecourt
Generic JHA but WCF and LMRA capture the site specific details and hazards
WCF duplicates our own form, but ours is more comprehensive, so we use both to comply with external audits

8.8.3 Is the system fit for purposes in all circumstances?



Result showing a strong agreement with the statement

9.0 Site visits



As previously identified, one of the primary methods for assessing the safety culture developed across the retail forecourt industry, was to visit sites to observe how the culture works in practice.

The sites were chosen at random and included both PMC and FMC contractors employed on both sides of the contract. The sites were identified from the contractors scheduled programme of works and selection was made based on geographical location and timings, allied to the inclusion of sites with a broad range of contract requirements. For example, sites chosen included small scale FM type works and medium sized works such as internal store works, up to and including large scale project redevelopment of the retail forecourt space.

For the smaller sites visited, the works involved small scale works within the store carried out by a single operative from the FMC partner (Vinci FM). Several factors were identified during these visits and operative onsite interviews, that were both good examples of the work practices being carried out as per the Shell expectations/requirements, but also some that could increase risk if the safety management system failed.

Fig 5 Fridge clean pre planned maintenance as part of the FMC contract

Positive Observations include:

- Communication systems for lone workers across both PMC/FMC L3 supply chains appeared to be robust.
- Operative competencies for the sites visited were of a good standard and more importantly, relevant to the tasks being undertaken by the operatives in question.
- Impact on the day to day running of the retail space was kept to a minimum (except where full site closure was required), this allowed the retailer to continue operating with no loss to earnings or service delivery.
- On site documentation was fully and readily available for auditing purposes, including signing in procedures, method statements, risk assessments, JHA relevant for the task and other specific documentation such as work clearance form and permit to work.

In general there was a positive view held by the site operatives in regards to the Shell safety system and culture, and those who are naturally sceptical by nature are changing their attitudes towards this, these tended to be on the project side of the contract, who primarily work for the PMC and as such tend to operate on closed sites only.

It was made clear during these visits, that Shell do not demand unrealistic timeframes from their contractors, which could lead to the temptation to cut corners to achieve these demands, and that Shell listens when schedule changes are needed or delays driven by either safety delays or during the current supply crisis, delays in receiving parts from 3rd party manufacturers.

It was noted that during these visits, certain contractors stated that they work on other retail forecourts provided by other Oil producers and they try to bring those up to the accepted standard of working that is expected on the Shell retail forecourt estate, often with a positive result.

Another observation on site was the intervention of an engineer when he spotted a member of the public on their mobile phone whilst refuelling their vehicle. The engineer approached the member of the public, informed them of the dangers of using their mobile phone on the forecourt and instructed them to finish their call and put the phone away, which the member of the public duly did without any fuss or comeback. One of Shell's golden rules is to Intervene when you can see a potential incident, which is exactly what this engineer did,

proving that the safety culture developed over many years is still functional and working as expected.

All engineers working on site have the power to intervene as they see fit if they observe something with the potential to cause harm of damage and they are encouraged across both sides of the contract to intervene if it is safe to do so.

As part of this they are also given authority to close the forecourt to business if the works being carried out warrant it, the retailer is informed of the requirement during the initial communication from the PMC/FMC office staff, prior to works commencing as any deliveries would need to be placed on hold until the works had been completed.

Negative observations include:

- Live working near members of the general public, with the potential of increased risk to both the public and engineers, usually mitigated with barriers and access control in place
- Use of the retail permit to work system not as clearly understood by all on the PMC/FMC sides of the contract, some works that would be expected to be carried out under a permit were not
- Retail staff not always informed of the works being undertaken or when and what responsibilities they have in facilitating these works (i.e. emptying fridges that require cleaning out). One operative stated that when works are carried out on a BP or Esso site the retailer is notified a week in advance and they are fully aware of what is required prior to the engineer attendance.
- Proper and clear identification of the work to be carried out and correct selection of the most competent engineers tasked to perform the works. In some cases, operatives were asked to carry out works they may not be fully conversant with.

For the larger PMC tasks, the scope of works was far more complex with multiple contractors on site carrying out a variety of tasks from fuel distribution pipework's, canopy repairs, shop fit outs and fuel dispenser fitting. As such it was expected that projects of this size and nature require a more robust and structured safety management system and a greater depth of pre-construction information gathering prior to commencement. The PMC side of the contract tend to have a full time project manager available on site for the duration of the project phase and this was borne out by these sites having good examples of all the relevant documentation both PMC Artelia and Shell, encompassing both Health and Safety cultures.

On sites of this size it was evident that the PMC/FMC L2 were in control of the safety management systems, with all documentation, project and programme delivery being coordinated and managed by the PMC/FMC L2 with very minimal Shell involvement in the process, until project handover.

Looking inwards from outside the project deliveries, this might raise concerns with regards to project ownership and fulfilling certain roles as defined within CDM2015, this issue was mitigated by the robust selection of contractors criteria Shell employs during their onboarding process and PQQ systems.

10.0 L2/L3 Interview process

The inclusion of interviews into the research study was based around the premise of obtaining further, more detailed information from the supply chain, in respect of the methods and systems that Shell require for working on the retail forecourt estate, looking at these requirements from the perspective of the L2's/L3's.

The theory behind this was to allow the identification of any areas of conflicting processes or failings within the respective management systems developed to ensure the Shell requirements are met.

The interview process involved the selection of appropriate individuals currently occupying senior management roles within the PMC/FMC L2 suppliers and respective L3 contractors.

A cohort of 10 was selected to interview across both PMC & FMC contractors.

The interview format was devised based on analysis of the raw data from the online survey and included a question set divided into 3 main categories:

- The individual's role and requirements of that role
- How does the respective L2/L2 management system tie in with the Shell requirements?
- Are there elements of the management system that could/should be changed?

As the respective L2 interviews perform different roles on behalf of Shell, it enabled a broader understanding of the Shell management systems and in particular, the key area in respect of selection and management of the supply chain at L2 level.

During the interview process with the leadership teams of both the PMC Artelia and FMC Vinci FM and selected L3 contractors, the following observations were made:

It was clear that the management roles within the L2's had clear duties to perform, imposed on them by Shell, supported by a robust and transparent internal management system, that allowed for the flow of information up and down the chain accordingly. This in turn enabled the management of projects and facilities management services to consistently deliver a high standard in respect of health and safety on site.

Most answers given during the interview process, portray a positive mind set to Shell's processes and management systems. It was made clear that from a management perspective, that the supply chain allows for adequate/good resourcing, programme management and delivery and transparency across all the PMC/FMC works being carried out.

The interviews did provide evidence of one issue that most of the participants agreed on that directly derives from Shell's systems., which is the production and recording of onsite documentation. Documents such as permit to works and inductions are often duplicated on particular projects (PMC side) and that the permit system can be at times a lengthy process when given the scope of the intended work the permit is required for, an example of this was given for a permit for "hot works" to be issued to drill two holes into a metal stanchion, the permit issuer drove 2 hours to attend site to issue a permit (approx. 30mins on site to issue) for a task that took less than 5 minutes to perform, followed by a 2 hour drive back to the office/home base location. As yet Shell do not allow for remote permitting of works, however on a Global level they are looking into this issue, utilising ATEX rated wearable technology,

where the permit holder can show the permit issuer exactly what the task is and what control measures are in place, using said ATEX rated technology, with the issuer able to remotely "see" what the permit is to cover, then issuing a permit remotely. Technology has moved on at pace and the forecourt industry needs to keep up.

11.0 Results and discussion

This review of Shell's HSSE processes and culture, developed over time and going through a significant change during this current 5 year cycle, has provided a greater insight and transparency into the way in which these systems are integrated into their collective supply chain in the UK market place.

Not only has this research identified where Shell have "got it right" when compared to competitors in the retail forecourt operation space, highlighting positive elements of the processes and culture, strengthening the working relationships with L2 partners and the collective L3 supply chain, it has also identified where shortfalls are present, allowing for feedback to be given to help improve and make changes as required.

Of the issues that have been identified, it must be stressed that they are commonplace across the retail industry and can be realistically expected of any large scale retail company, be it fashion, sports or indeed fuel retailing.

The identification of these shortfalls puts Shell in a strong position to address these issues and helps cement their position as industry lead on Health and Safety within the retail forecourt market place.

This research study set out to determine the answers to the following questions:

- How is HSSE carried out differently within Shell compared to the other U.K. Forecourt providers?
- Are the U.K. statutory requirements closer to as low as reasonably practicable and as such no additional requirements are needed?
- How easy is it to procure new contractors based on existing HSSE requirements?
- Is there added complexity and duplication that can be avoided by consolidation?

The data when collated and analysed provided the following results:

11.1 How is HSSE carried out differently within Shell compared to other U.K. forecourt providers?

The approach taken by Shell with their HSSE cultures differs from their competitors in the fact, Shell incorporate their own systems and processes, in particular GIDS, Inductions, permit to work and specific accreditations to work on the estate.

These systems are in line with current U.K. legislation and in some cases exceed what is required to comply with current legislation.

The physical element of Health and Safety on site is similar across both side of the contract delivery for Shell, to those of any competitor, this can be attributed in part to the very nature of the works being undertaken and the cross U.K. retail forecourt experiences of the contractors undertaking the work (not purely working for Shell).

Shell do incorporate a greater level of monitoring and onsite management than other competitors and as such the general Health and Safety culture across the Shell network can be seen as industry leading.

When reviewing the results of the online survey, within the sections *Understanding Shell's requirements* and *HSSE Culture*, statistically these results were high, On review, elements of the survey, such as how the supply chain see Shell's HSSE culture are overwhelmingly positive, Further to this, within the free text aspects of the survey and during the interview process in particular, a number of comments have been made in reference to the trust that the supply chain feels that Shell have in them to deliver the works within and adhering to the safety culture. This feeling of trust, which is a direct contrast to the previous safety culture promoted by Shell, in turn promotes the feeling that frontline staff can raise concerns and if needed interrupt or indeed stop works progressing if the individual feels that conditions on site are not safe.

As identified above, Shell's HSSE requirements and approach towards HSSE differs from their market competitors, there is a level of management that Shell impose upon their collective supply chain in order for them to retain close control of their sites, this level is not seen at other market competitors in the U.K.

This approach can be seen as a positive effect and should be incorporated in greater depth across the supply chain if possible, to further encourage integration.

11.2 Are the U.K. statutory requirements closer to as low as reasonably practicable and as such no additional requirements are needed?

The Health and Safety culture across the Shell U.K. market place, is at a high standard and is constantly improving with new technology and processes as required.

Generally, within the project management contract, this culture is supported by companies and organisations to help improve this.

However, despite this a number of incidents have occurred in recent times (cable strikes etc) which have reflected poorly on the project management contractors, and as such perception of both the general public and across industry cannot be discounted.

Meeting this level of HSSE culture within the U.K. is clearly the minimum standard acceptable by Shell. Theis level of compliance is currently set above the statutory requirements and this helps to not only enforce the safety culture across the supply chain, but also have a positive impact on the public perception of Shell. Changes and improvements identified within the U.K. as a result of statutory requirements, can also filter out across the Shell Global markets, increasing health and safety levels in less developed markets.

Elements of the survey which encouraged a direct comparison between Shell systems and current statutory requirements, identified some differences and produced some interesting scores. However, for the most part, these differences were seen as being generally positive. Examples if increased documentation and the induction system was highlighted as being above the statutory requirements and if viewed as a single entity, could be identified as being overly burdensome. However, when looked at across the supply chain, Shell's levels exceed the statutory requirements, only where necessary and this need is driven by the management system Shell have incorporated.

11.3 Would it be easier for Shell to procure new contractors and suppliers if the HSSE requirements were aligned to statutory legal requirements only?

The level of HSSE requirements for working on the Shell contract are somewhat cumbersome and in cases expensive to implement fully, in respect of the CBRE/UKPIA cards.

However, this high standard of HSSE requirements allows for clear control and visibility on the on-boarding process and requirements of any prospective new supplier.

This process and HSSE requirement, allows shell's supply chain to operate with a greater level of independence and autonomy across their programme of works when compared with others such as BP/Esso in the U.K. marketplace.

As such, any reduction or apparent reduction in the HSSE requirements that Shell has embedded in the selection process has the potential to increase risk, as new suppliers may not adopt as stringent safety measures across their sites. It could also take extra time for new suppliers to fully adopt and adapt to Shell's methodlology and HSSE requirements.

However, health and safety is improving across the retail industry, as clients, contractors, governing bodies, and the general public realise that this is a shared goal. By identifying with this level of improvement and leading their supply chain to comply with it, Shell are setting a positive example across the industry.

11.4 Has Shell's requirements added complexity and duplication? And can this be consolidated or avoided?

Within the systems and processes that Shell have developed and adopted over years, are the production and retention of relevant health and safety documentation. This level of documentation, however, must be carried out to the required level, by the supply chain, in order for themselves to maintain the necessary levels of compliance, as such duplication does occur within the supply chain and this is seen as a potential failing of the system.

This level of duplication and sheer volume of documentation has led to additional resource requirements across the supply chain to manage the process. Site managers/supervisors, when questioned, felt their time was spent almost exclusively, carrying out project/site administration as opposed to actually managing/supervising the work being undertaken. However, it is important to note that this does not manifest itself as a failing of compliance but a problem the leads to lost time and inefficiencies within the supply chain, which on a greater scale could lead to project overrun and over spend.

The process of reducing this duplication would focus on the supply chain systems and processes and the production and recording of such documentation.

The documentation required is somewhat cumbersome and requires a through training session with the supply chain to ensure they fully understand what the system requires them to complete on a daily basis, this training takes place during the on-boarding process and may extend to extra sessions based on numbers of staff requiring the training.

12.0 Conclusion

This report into the HSSE culture, requirements, and processes of Shell has identified that Shell has a robust HSSE culture that is flexible when required to be so. There are differences in the way they manage their supply chain in contrast to their competitors, with added complexity and duplication of paperwork on the Shell estate and requirements for certain accreditations to be achieved before a contractor is allowed to work on the Shell estate.

Overall, the cohort have an overwhelmingly positive view of Shell's health and safety culture, which the majority of the cohort believes, that Shell's process and HSSE culture is second to none and only minor tweaks would be needed to improve the system, ensuring that Shell maintain their class leading " Best of breed" HSSE culture into the future.

The report identified five key points, that would further support Shell's HSSE culture and integration across the supply chain.

- For small to medium projects the use of paperless site management systems, integrated with Shell's online system
- Further implementation of adoption of digital support across Shell's project programme, in particular regarding individual project information.
- Incorporating a system of sub-contractor selection that accounts for Geographical location
- Greater integration of documentation across projects with the supply chain
- Greater engagement with Shell retail, focusing on passage of information, training, and project programming.

The analysis conducted within this report does have some limitations, these being.

1. Not all respondents answered every question on the online survey
2. The cohort was predominantly management "top heavy" with only 11% of front line/operational respondents to the online survey
3. During site visits the researcher was seen as being "management" and this may have limited honest responses to questions posed at the time, however this requirement was only applied on the PMC sites visited, FMC sites, the frontline staff are personally known to the researcher and as such there was no requirement for "management" to attend and this gave the frontline staff greater freedom to act as they would on a normal daily basis.

13.0 Recommendations

From the feedback via the online survey/questionnaire and the interview process, the following recommendations are made:

- **For small to medium project work, the use of a paperless site management system should be incorporated within Shell's online system**.
  From evidence collated during the site visits and from results of the online survey/questionnaire, one of the issues identified was the production, duplication and recording of project specific documentation. A potential solution to this would be the integration of digital site management and removal of paper based documentation. This would also facilitate sharing of documentation between Shell, PMC, and FMC contractors in a more prudent and secure way.

  This issue is one which is commonplace across retail industries as they tend to have a far larger estate requiring upkeep on a regular basis, multiple projects are carried out on sites throughout the UK on an annual basis. The benefit of a paperless system is that it allows information to be stored and accessed easier at site level for project management and allows for previous documentation to be made readily available as required by both PMC and FMC contractors.

  More user friendly digital systems are in evidence and use across the retail sector, with platforms such as I-auditor, Power BI and Dropbox being used to enhance site management and provide a greater depth of raw data to the team. This can help reduce the time for pre-construction phases and duplication of documentation.

  The introduction of an online system would also have a cost and environmental impact, with the average small-medium project using at the minimum, 600 sheets of paper with associated Ink and photocopying/printing electrical costs.

- **Further implementation of adopting digital support across Shell projects, in particular individual project information**
  Identified in the survey/questionnaire in the *Contractor accreditation* section was the question posed as to what if anything, would individuals change and a number of answers focused on documentation.

  This was reinforced during the site visits carried out in the production of this report and was highlighted as one of the principle reasons for delays in the programme of works. Whilst this is a common thread across retail, the ability to compete with competitors and complete projects successfully and on time would give Shell a competitive edge.

  By encouraging and having greater reliance on digital platforms and storage, would have the potential to allow documents and data to pass through the supply chain and Shell in a more secure and holistic way. Furthermore, document storage and availability would improve over time, this in turn would aid the production of pre-construction information and identification of risks in future projects. Digitisation has also been shown to have a greater positive effect on the environment, reducing waste and lowering the organisations carbon footprint.

- **Incorporating a system of sub-contractor selection that accounts for Geographical location**

  Identified during the review of the data, was the tendency of the Shell supply chain to operate remote to their actual home location. This was an observation that can be seen across many different construction and facilities management activities and is not a Shell issue alone.

  However, an implementation of a process to reduce or alleviate this burden upon the supply chain may result in a number of benefits:

1. Reduction in the organisations carbon footprint due to reduced journeys
2. Better employee welfare, being able to end the work and go home as opposed to spending time away from family in hotels, with associated costs
3. Reduced costs for fuel and hotel meals etc away from home locations

  Shell do have a policy of 200miles travelling/4 hours driving and the driver has to stay overnight at the location, however this is difficult, if not impossible to enforce due to the nature of the works planned in advance.

- **Greater integration of documentation across the projects within the supply chain**

  The principle issue of documentation and permit to work systems resulting in duplication in certain circumstances, causing small delays in the project delivery, is one which could potentially be resolved through a number of improvements. However, any improvements have to be gradual as the documentation process is "live" and managed on a Global scale, with any changes made subject to Global approval and adoption. Any changes made must ensure that they do not increase risk or diminish existing controls of risk in the work place.

  The primary method of resolving this issue would revolve around integration as opposed to duplication. Shell's supply chain is robust and requires multiple elements of compliance in order to fully function correctly. This in turn has led the supply chain to adapt their methods of working and managing health and safety, to align with the requirements of Shell. The potential to integrate these systems may overtime, improve this process, and allow for shared documentation and reduce the need for duplication.

- **Greater engagement with Shell retail focusing on passage of information, training, and project programming**

  The level of engagement between Shell and its supply chain was identified as a key area, due to the level of autonomy that contractors are afforded when working on the Shell estate. One issue identified was the passage of information regarding project and programme changes. Any changes have the potential impact to the retailer of both cost and time and as such, identification of these issues at an early stage must be key to ensuring projects are carried out safely and in a timely manner.

  The engagement between Shell and the supply chain would benefit from a greater level of cooperation, allowing the supply chain to better identify possible solutions. Furthermore, as mentioned previously, any future systems may require training and this could be incorporated into onboarding sessions to greater improve communication.

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16.0 Appendix A: Interview questions

Role type:

- Senior management
- Manger/supervisor
- Operational frontline staff

Questions posed to all staff during the interview process:

Describe the day to day aspects of your role

What Health and Safety responsibilities does this entail?

How is Health and Safety managed within your undertakings?

What processes do you use to comply with Shell HSSE expectations?

Do you feel that any processes give rise to duplication of documentation? If yes provide examples

Do you feel supported in your role by Shell?

How do the expectations placed on you by Shell differ to other organisations that you work for?

Do Shell's systems and processes give rise to issues of delivery of service? If yes provide examples

Respondents were asked to expand upon answers given during the online survey section of the study as well as the opening questions above.

This question and answer interview session provided a greater understanding of both responses seen from the online survey and also as observed during site visits with operational frontline staff working on the estate.

17.0 Appendix B: Engagement strategy

1.0 Engagement of L2 & L3 suppliers to Shell

In order to engage with personnel from both the PMC & FMC L2/L2 supply chain partners, the purpose of this research was communicated during the November 2021 LCSC.

From this initial communication piece members for the research cohort were identified and notified that the online survey/questionnaire would be sent out to them in January 2022, with a two week period to complete.

All were informed that the survey results were anonymous and there would be no data identifiers included within the report.

The cohort consisted of senior management members of respective suppliers down to the frontline staff who operationally deliver the work for the Shell contract.

The survey was intended to be circulated to circa 30 members of both PMC &FMC supply chain partners.

From these results, the interview questions were formulated, with the intention to delve deeper into the data responses to get a true understanding of the HSSE culture developed by Shell, delivered, and managed by PMC &FMC L2 and adhered to by the supply chain.

The survey did not collect any personal data; however, it was subdivided down into three categories for ease of interviewee selection.

- Senior management or Contract management
- Manager- site based
- Operational staff

2.0 Interview process

The interviews were to be conducted via TEAMS or if Covid 19 rules allowed, face to face at a neutral venue acceptable to both parties. The process was to take no longer than an hour with the interviewees selected from the cohort based on job role, encompassing all aspects of the supply chain.

The interviews will be used to verify the data collected from the online survey/questionnaire, in addition to exploring further, any trends that were seen within the survey data.

3.0 On site visits

In order to fully appreciate the HSSE culture on site, it was deemed necessary to attend various sites that both PMC &FMC tasks were being conducted. The site visits allowed a for a greater understanding of the application of Shell's process and systems, these visits allowed the researcher to contextualise the feedback generated from the survey and interviews.