

Annex A – Information Released under FOI 2015/16679

Subject	Shale gas video scripts.docx
From	REDACTED (Office for Renewable Energy Deployment)
To	REDACTED@contentod.co.uk
Cc	REDACTED (International Climate Change)
Sent	28 January 2015 19:08
Attachments	<<Regulatory Roadmap.pptx>> <<Shale gas video scripts.docx>>

Dear REDACTED,

We found today's meeting very useful.

Initial draft scripts

We agreed to share the draft scripts we have put together in a bid to save time. See attached document. There are some comments in the document. They relate to the fact we have different environmental regulators for the devolved nations and there some differences in their approach. Where possible we would want to capture this. However it may not be possible as some of the common elements of their work are not visual. We are trying to get examples of consistent areas of environmental regulation that are visual.

Regulatory roadmap

The roadmap at the link below explains the role of the different regulators.

<https://www.gov.uk/government/publications/regulatory-roadmap-onshore-oil-and-gas-exploration-in-the-uk-regulation-and-best-practice>

The powerpoint attachment provides a high level visual summary of the roadmap.

Factsheets

We also agreed to share the factsheets we have. These are at the link below:


<https://www.gov.uk/government/publications/about-shale-gas-and-hydraulic-fracturing-fracking>

We aim to send the contract through tomorrow.

Happy to discuss if anything is unclear.

Kind regards,

REDACTED

 Department of Energy & Climate Change	REDACTED Office of Unconventional Gas & Oil ✉: REDACTED@decc.gsi.gov.uk REDACTED Follow us on Twitter.com/DECCgovuk
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Subject	FW: Revised Costs + Requirements List
From	REDACTED (Office for Renewable Energy Deployment)
To	REDACTED @contentod.co.uk)
Cc	REDACTED (International Climate Change)
Sent	30 January 2015 15:38
Attachments	<<OUG Requirements List 29-10-15 .docx>>

Hi **REDACTED**,

Thanks for the requirements list.

I have made minor amendments to the specific video requirements section (see attachment) to highlight that:


- there needs to be reference to shale oil as well - the licences allow operators to extract shale oil;
- HSE's regulatory role also takes place during operations – in addition to construction and decommissioning phases.

Otherwise the requirements are fine.

Thanks too for the revised quote sent through earlier.

Regards,

REDACTED

 <p>Department of Energy & Climate Change</p>	<p>REDACTED</p> <p>Office of Unconventional Gas & Oil ✉: REDACTED@decc.gsi.gov.uk</p> <p>REDACTED</p> <p>Follow us on Twitter.com/DECCgovuk</p>
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From: **REDACTED**@contentod.co.uk

Sent: 29 January 2015 17:35

To: **REDACTED** (Energy Development); **REDACTED** (Energy Development)

Cc: **REDACTED**

Subject: Revised Costs + Requirements List

Hi **REDACTED**

Thanks for your time yesterday, it was great to meet you. We are enjoying working on the project already and looking forward to working closely with you for the next few weeks.

I've attached two documents to this email. The first is a Requirements List which explains what we understand your basic requirements to be. Our standard method of working is to produce this document, get your feedback (ie additions, corrections etc) and then get you to sign it off so we know we both have the same expectations.

This means if you request work not in the scope of this document (ie the addition of a 4th film for example) we can go through our formal change process and discuss the additional resources required.

I've also attached a revised budget. Some lines have stayed the same as the short turnaround time for this project means that some resources aren't really affected. However, animation, design, edit, script, storyboard, voiceover and music requirements have all diminished. In most cases we have removed a quarter of the time and in others a bit less as some of the initial work that was needed for four videos would have scaled up whatever the final number of videos. eg. designing the aesthetic, creating some of the assets etc.

Please let me know your thoughts and particularly anything you think is missing in the requirement document.

I look forward to hearing from you.

Regards

REDACTED

Subject	FW: Update Scripts
From	REDACTED (International Climate Change)
To	REDACTED@contentod.co.uk ; REDACTED@contentod.co.uk
Cc	REDACTED (Office for Renewable Energy Deployment); REDACTED@hse.gsi.gov.uk ; REDACTED
Sent	11 February 2015 22:32
Attachments	REDACTED

Resending without the identity guidelines – I had some bouncebacks.

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From: REDACTED (Energy Development)

Sent: 11 February 2015 22:29

To: REDACTED

Cc: REDACTED (Energy Development); REDACTED@hse.gsi.gov.uk; REDACTED

Subject: RE: Update Scripts

REDACTED,

As discussed we agreed to send through the following:

- Comments on scripts and storyboards from 10 Feb
 - Attached – happy to discuss tomorrow. Please call on my mobile (no below)
- Branding guidelines
 - Also attached
- Details on size of site, triple casing, borehole and lateral wells, size of rigs for perspective on visuals
 - Follow up email to come.
- Pictures/imagery of typical site and geological cut out
 - Follow up email to come.
- DCLG agreed lines on planning
 - We are still in discussion – we will confirm asap
- HSE contact number (will send today)
 - Sent earlier
- EA interviewee
 - We are still in discussion – we will confirm asap
- Logos for all the relevant organisations
 - We will commission but this may take a few days to get through.

Further, we are broadly content with the look. Anything further you can do to make it more 'sober' or scientific would help. The colour tone could potentially tighten up. We also need to meet accessibility guidelines – please consider visual impairment and making it easy to read regardless of reading ability.

Please let us know if there is anything further. We look forward to confirmation on timing etc from you tomorrow. We'll wait to hear the voiceover options.

Thanks,
REDACTED

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From: REDACTED@contentod.co.uk

Sent: 10 February 2015 19:42

To: REDACTED (Energy Development); REDACTED (Energy Development); REDACTED

Subject: Update Scripts

Hi REDACTED

Please find attached updated scripts and storyboards for the videos explaining what shale gas and oil are and the regulation framework. We haven't tracked all the changes because we have restructured them quite a bit.

The final script will follow later and will be waiting in your inbox in the morning. We haven't completed a storyboard for the HSE video due partly to the time constraints but also because the combination of some visual descriptions and these storyboard will hopefully suffice to demonstrate if we have understood your feedback.

We have included descriptions of the visuals in the storyboards but there are also a few other points I should make.

General Points

We have based the style on your infographics and the first mood board. Hopefully we have found the right visual approach. We are keen to see if you like these natural colours or would like to use a different palette as per the mood board.

We are very aware of the proportions of the rig on the surface (30m) to the depth of the shale rock layer (1 mile - 1600m). We still need to create another frame that completely shows this scale in one frame. We will ensure sure all frames are in that proportion.

Specific Points - What is Shale Gas

- 1) Do you want the UK Map of potential sites to show the exact areas as per the map link you sent.
- 2) We will talk to you geologist about how we should represent the shale rock layer visually.
- 3) We put Professor Mike Stephenson in this video by accident - My Mistake. I appreciate he will actually talk about the water related risks in the regulation video.
- 4) I think we have used the illustration of wellheads used for production in our sealing off illustration. More information about how the wellheads appear at all the different stages would be helpful.
- 5) Do you want to show the process of filling the wells with cement in this video or will that be OK just included in the HSE video.

Specific Points - The Regulatory Regime

- 1) Our final well blueprint will show the underground proportion of the well rather than the rig above ground.
- 2) Frame 11 - We need more information about how we should represent underground water supplies and if any are found further underground. We will speak with your geologist about this.

I hope all this makes sense. If you have any questions please do not hesitate to contact me.

Regards

REDACTED

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REDACTED

e: REDACTED@contentod.co.uk



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Tel: 0207 127 4258

Tel: 0114 327 3250

Subject	Re: Statistics for shale video 1
From	REDACTED
To	REDACTED (Office for Renewable Energy Deployment)
Cc	REDACTED (International Climate Change); REDACTED@contentod.co.uk)
Sent	13 March 2015 13:31

Thanks REDACTED

On Fri, Mar 13, 2015 at 11:02 AM, REDACTED (Energy Development) <REDACTED@decc.gsi.gov.uk> wrote:

Hi REDACTED,

Please find the figures for the story board 1 and 2.
The source for both sets of figures is UK Energy in Brief 2014.

I still need to confirm the gas consumption projection figures.

Total production of primary fuels (used with the story board 1)

Oil - 39%

Natural gas – 32%

Coal – 7%

Primary electricity – 16%

Bioenergy & waste – 6 %

Natural gas consumption (used with story board 2)

Power generation – 24%

Industry – 35%

Domestic – 41%

Thanks.

REDACTED



Department
of Energy &
Climate Change

REDACTED

Office of Unconventional Gas & Oil

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Tel: 0207 127 4258

Tel: 0114 327 3250

Subject	Re: Fracking Videos
From	REDACTED
To	REDACTED (Oil and Gas Authority)
Cc	REDACTED (Office for Renewable Energy Deployment); REDACTED (International Climate Change)
Sent	16 March 2015 10:45

Hi **REDACTED**

Thanks for the information.

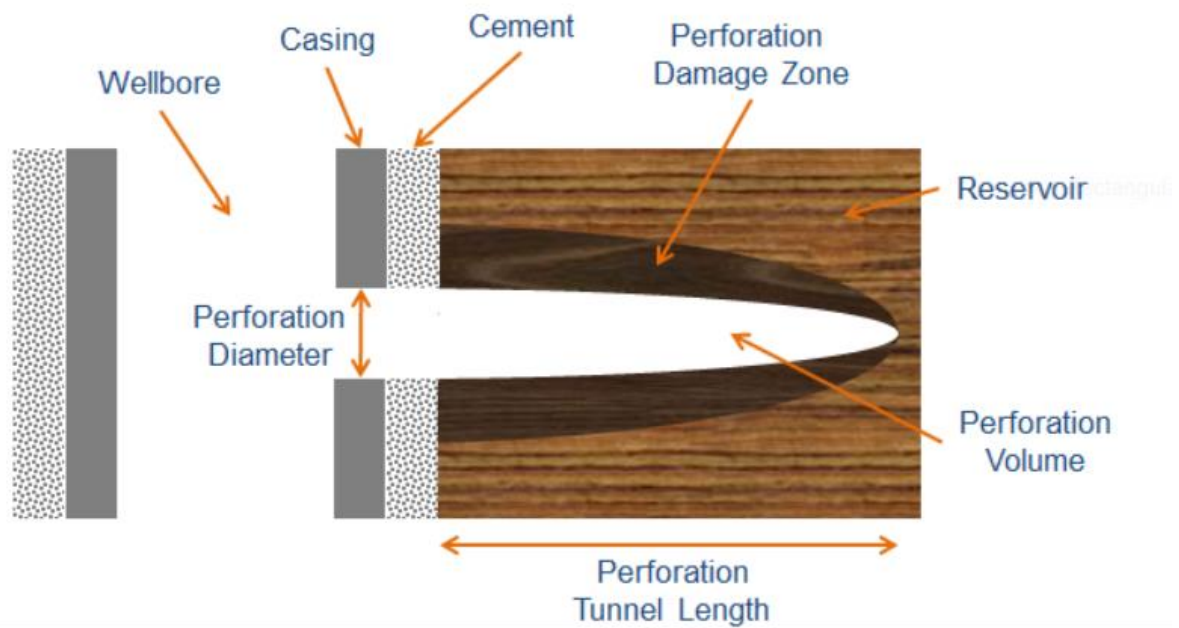
Regards

REDACTED

On Fri, Mar 13, 2015 at 3:29 PM, **REDACTED** (Energy Development) <**REDACTED**@decc.gsi.gov.uk> wrote:

Microscopic no, but small yes on the scale of your images. The perforation diameter is 0.4-0.5 in and will extend, carrot-shaped into the strata 3-4 feet.

Regards, **REDACTED**



From: REDACTED@contentod.co.uk

Sent: 13 March 2015 15:03

To: REDACTED (Energy Development); REDACTED (Energy Development); REDACTED (Energy Development)

Subject: Fracking Videos

Hi REDACTED

I hope you are well. When we received feedback on our last set of videos (which I believe you have seen) we received a comment about the size of the holes in the fracking pipe - the suggestion was they should be a lot bigger.

I explained that following a conversation with you I understood that the charges were microscopic that the charges and holes would not be very visible.

I wanted to check I got the right end of the stick or whether that approach is incorrect. To some extent our animation has to be representative due to the nature of this work but we have tried to make this particular element reasonable.

I would be interested to get your thoughts.

Thanks

REDACTED

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e: REDACTED@contentod.co.uk



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Tel: 0207 127 4258

Tel: 0114 327 3250

Subject	Shale gas and oil production
From	REDACTED (Office for Renewable Energy Deployment)
To	REDACTED@contentod.co.uk
Cc	REDACTED (International Climate Change); REDACTED@contentod.co.uk
Sent	17 March 2015 16:19

Hi **REDACTED**,

With regard to the how long the stages of shale take we would like to keep to the timescales used in the infographic at the link below.


For production it is generally 20 years plus – i.e. as long as the well is commercially viable. Decommissioning would be the quickest a few months, but that depends on planning consent, environmental conditions and landowner access agreements, so can take longer.

<http://www.shale-world.com/2014/04/17/infographic-stages-uk-shale-gas-oil-exploration-development/>

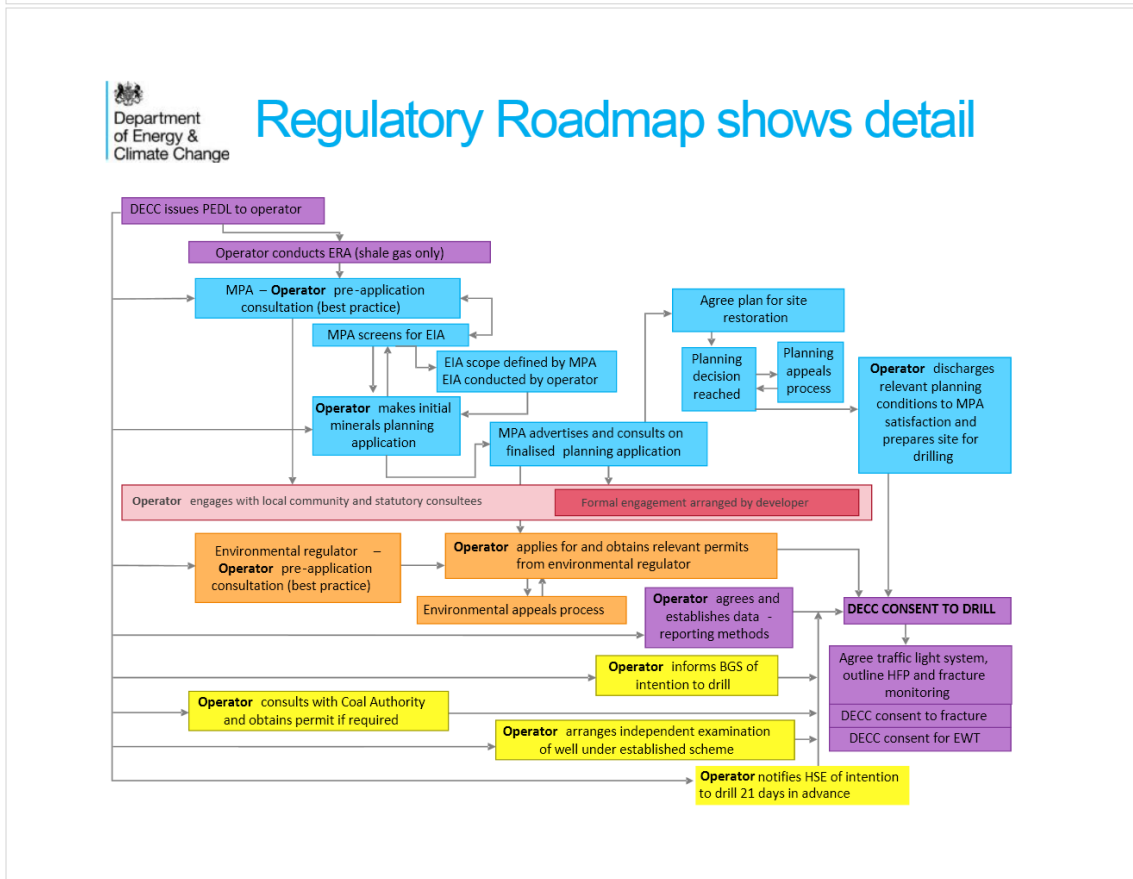
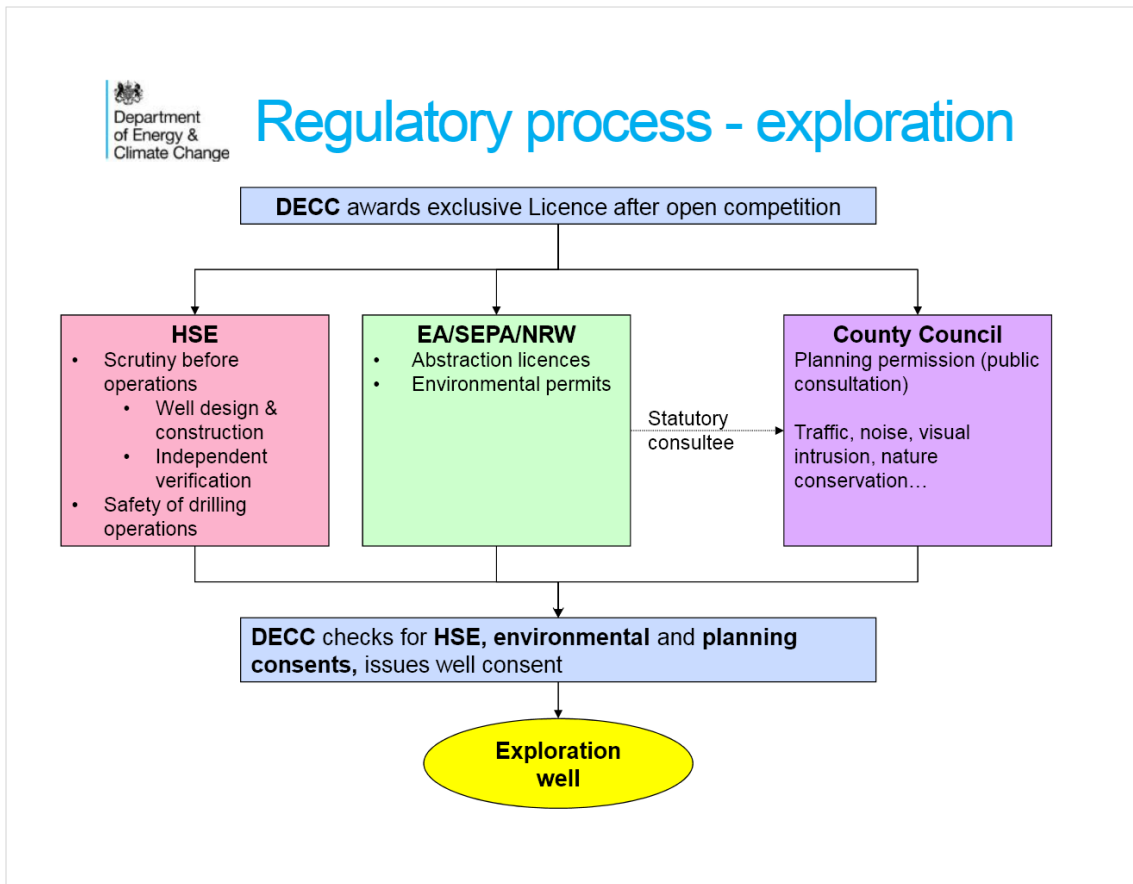
Happy to discuss.

Thanks.

REDACTED

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Email Attachments



Video 1 Overview of shale gas – what it is and how it is extracted

Over a third of our energy needs are met by gas. It's used not just for electricity but also industry, heating, cooking and others.

Where do we get it? We import half of it¹ and Government projections suggest that by 2025 we expect to be importing well over half the gas we consume².

Shale gas is natural gas found in impermeable rock over a mile underground. We have shale gas or oil deposits in the North of England, the Weald Basin in Sussex and Surrey, the Midland Valley in Scotland and potentially other areas of the UK.

Shale gas development in the UK is at an early stage. Companies are going through the application process to start exploration to determine how much shale can commercially be extracted. If commercial then the next stage is pre-production, followed by production and decommissioning at the end of the life of the well. Permissions from a number of regulatory bodies are needed for each stage and there is public consultation at each stage.

A typical shale exploration site is about the size of a football pitch – 1 to 2 hectares - on the surface. A company may explore at several sites to assess the best place for production. It contains portacabins for staff living quarters and restrooms, water and waste storage, processing facilities, a well pad and a drilling rig.

To obtain shale gas or oil, a process known as hydraulic fracturing or fracking is used. A well is drilled down from the surface, in the UK this is generally a mile underground at least. This is followed by drilling horizontally to the rock where shale gas or oil can be found.

Once this source rock is reached, the rock is then fractured by pumping frack fluid – a mixture of sand, water and approximately 1-2 % chemicals at high pressure at intervals along the horizontal drilling line. This makes tiny cracks which help to expose more of the rock so that when the fluid is taken out, the shale gas or oil flow to the surface.

At the surface the gas or oil is separated from the fluid. If oil is recovered it is sent to an oil refinery or petrochemical plant. Gas obtained during exploration (testing to establish whether commercial quantities exist) is normally flared and is a very small quantity. Once commercial production starts it can be connected to gas pipelines or to a power plant, used onsite or compressed and tankered away.

¹ [DUKES 2014](#).

² [Latest DECC production and demand projections \(published at https://www.gov.uk/oil-and-gas-uk-field-data\)](https://www.gov.uk/oil-and-gas-uk-field-data). Full statistic: UK production has been declining since 2000 and we now import around half of our net gas consumption with that share expected to rise to over 60%

Video 2 - Overall regulatory regime showing protections in place for shale gas and how the different regulators work together to avoid any gaps.

Shale gas is the natural gas held in rock about a mile underground. It is extracted by hydraulic fracturing, commonly known as fracking. Extraction involves well construction and drilling, and surface operations at the site.

There are some environmental concerns associated with shale gas extraction. The regulatory process of licensing, planning permission, environmental permitting and safety consents, plus independent monitoring provides protection for drilling or production.

[Diagram of typical exploration site with different regulators highlighted]

We will look at environmental protections for water as a way of explaining the regulatory system.

There is a common misconception that the water contamination could occur from the fracks deep underground. The risk is that water contamination could occur through surface spillage, leakage into aquifers and gas emissions.

[Show fracks and distance from aquifers with scientist explaining the geology to indicate water contamination does not take place from the fracks deep underground. The potential for water contamination to occur is close to the surface through well leaks and spillage on site.]

So let's take a look at these risks.

- 1) Well leaks – water contamination can occur if there is a leak from the well. This would allow either fracking fluid or gas to escape into the environment close to the surface and into water source or aquifer.

Important in managing this is the well design, which needs to be built to the same tough standard as offshore wells. The potential operator provides Health and Safety Executive with the well design for review before operations. HSE scrutinises these and ensures that the safety features of the well design are sound. They also require that an independent well examiner assesses the design as a further check.

The quality of construction is equally important. During construction and operation, HSE receive weekly reports from the operator. They monitor the work on the well and if they have any doubt that it hasn't been constructed or operated as originally advised, they can make unannounced site inspections or enforce changes.

- 2) Emissions to groundwater - the Environment Agency protects the environment and aims to prevent water pollution rather than repair it later. The Environment Agency will not allow any drilling operation or extraction facility close to underground water sources. The EA checks the chemicals used for fracking at the pre-application and planning stages to determine whether they are non-hazardous and acceptable for use in operations. EA also has joint inspections with HSE to ensure water safety.

Natural Resources Wales and Scottish Environmental Protection Agency are the respective environmental regulators in Wales and Scotland. They are responsible for issuing permits and consents that manage environmental risks in the devolved nations and have equally tough standards.

Comment [BJ(MR1): SEPA comment - needs to show that EA and SEPA control different things

Comment [AD2]: Can we send through regulatory roadmap with a note on this to them.

Comment [AD3]: Can you put a note on this explaining it to the contractors. Then can you call Emma and ask her to give you an equally visual example where they are all consistent. Filling in a plan is not visual.

Comment [BJ(MR4): Ideally we would like to include an example that covers Comment from SEPA to include example that is consistent for all environmental regulators. E.g. require the operator to have an agreed monitoring plan with pre, during and post operation monitoring requirements placed on the operator or that environmental regulators assess well construction. I think this will not emphasise the underground water source protection zone which we want to put across so I have amended the text slightly and mentioned the other regulators in the next paragraph.

- 3) Flowback fluid – this is the fluid that comes back up the well after fracking.

[Use scientist to explain that the geology (impermeable layer) prevents this from migrating upwards and contaminating aquifers]
Flowback is treated as waste by the environmental regulators. Operators are required to show how they will treat what comes back up through the well.

- 4) Spills and contamination – this would be a spill at the surface either at well head or during transportation of waste water from the site. The planning authorities assess the design of the pad to ensure operator plans for this by laying impenetrable material on the ground during site preparation and collecting any such run off water. The Mineral planning authorities will only grant planning permission for robust plans where risks are identified and mitigated.

Comment [BJ(MR5): Check if this is right –

- 5) Long term monitoring - the well is designed for long life and long term monitoring. This is achieved by triple casing used in well construction and is assessed by HSE and also EA.

To recap regulation involves:

- During pre- operation – DECC licences, regulates seismic risks and checks environmental impact assessments are in place
- Environmental regulators provide environmental permits, conduct baseline monitoring and inspections
 - HSE conducts health and safety assessments and inspections

During operations, these regulators will monitor and check that the operations are being carried out in accordance with their requirements.

At the end of the well life, decommissioning, the operator maintains responsibility for the site, including restoring the site to a suitable state.

Video 3 – Health and Safety Executive regulatory controls

The Health and Safety Executive is the health and safety regulator for Great Britain. They cover the safety of oil and gas exploitation onshore and offshore. HSE's role is to ensure the well operator complies with these health and safety regulations which will prevent, so far as reasonably practicable, those working at the site, or others who could be affected by the work (including members of the public), from suffering injury or ill health.

The health and safety regulations have been in place for more than 25 years and are goal-setting. In other words, they set an overarching goal to be achieved, but the employer must decide the best way to manage the risks thinking about the particular circumstances. There are also specific regulations that apply to extracting gas and oil through wells, including shale gas operations.

Well integrity is key to ensuring the health and safety of people and protecting the environment, and so health and safety regulations require that well operators must do everything they can to design, construct, operate and abandon the well in such a way that there can be no unplanned release of fluids.

The HSE also works with other organisations responsible for environmental protection, licensing and planning decisions related to shale gas and has a joint regulation agreement with the Environment Agency.

How does the HSE regulate shale gas and oil?

The HSE has a long standing and robust way of regulating all of the onshore oil and gas wells, including shale, which;

- Helps set the best practice standards for the industry as a whole; and
- Assesses particular sites and operators to ensure well integrity risks are properly managed. The HSE uses its team of experts who cover all types of hydrocarbon wells for this work. The HSE takes a lifecycle approach to well integrity – from design and construction, to decommissioning and abandonment.

What information does HSE get and how is it used?

The well notification, scrutinised by HSE's well specialists before work starts, contains a lot of information about the well, including;

- The equipment to be used and how the work will be completed and any activity that could lead to a leak,
- How the well design takes account of the geology and procedures in place to check the direction of the borehole,
- Drawings of the well and the position of the borehole compared to other wells and mine workings.

This information helps provide assurance that risks are managed appropriately.

Well operators must then send a report to the HSE each week during construction of the well with details of;

- Activity since the work started or since the last report,

- The borehole,
- The casing,
- drill fluid density

This information is checked against the notification, and helps the HSE well experts build up a picture of the risks associated with the well and how they are being managed. Any leak from the well or unplanned use of blowout prevention equipment must be reported to the HSE.

New notifications and further weekly operations reports are required throughout decommissioning and abandonment.

Wells must be decommissioned and abandoned to industry standards, so that a leak from the well is unlikely, with at least two steel and concrete plugs that are over a hundred of meters thick as part of the required standard. The HSE's well experts will check the abandonment work to make sure it is done in the right way.



OUG TENDER REQUIREMENTS LIST - 29/1/15

PROJECT PURPOSE

The purpose of this project is to provide the general public with engaging visual materials explaining Shale Gas and Oil - its extraction and its regulation.

This will be achieved with three videos explaining the independently verified facts in an engaging, authoritative and balanced way. This will be accomplished with the assistance of independent experts and regulators some of whom will also be interviewed for the videos.

OVERALL REQUIREMENTS

The overall delivery requirements are,

- 1) The production of 3 x 3 minute videos or equivalent (eg 1 x 2 min, 1 x 3 min, 1 x 4 min or similar)

This will include production of initial scripts and storyboards with final videos containing animation, live action, interviews, voiceover, music and all associated post-production. The videos will be of sufficiently high quality for distribution on YouTube and for screenings in front of larger audiences. The three videos will cover the following subjects,

- a. What is Shale gas and how is it extracted (title TBC)
 - b. The Role of regulation in Shale Gas extraction (title TBC)
 - c. The Role of HSE in Shale Gas extraction safety (title TBC)
- 2) The production of 10 Vines
 - 3) Delivery of Master Video & Vine files in a number of resolutions and file types (tbc with you) via file sharing and on a small portable hard drive or usb stick.



SPECIFIC VIDEO REQUIREMENTS

The videos will include information about and explanations of the following with possible other additions,

a) What is Shale Gas and Oil

- i) What Shale Gas & Oil are and where they are found
- ii) How Shale Gas & Oil are extracted - what fracking is and what happens to the gas or oil
- iii) What stage the UK industry is at
- iv) What a typical extraction site looks like

b) The Role of regulation in Shale Gas & Oil extraction

- i) Introduction to Shale Gas & Oil
- ii) Who the regulators are
- ii) How they work and what they do (using Water contamination as an example)

c) The Role of HSE in Shale Gas extraction

- i) Introduction to Shale Gas & Oil
- ii) Who HSE are and what they do in relation to Shale Gas & Oil
- iii) HSE's role in construction - particularly well integrity, during operation and the decommissioning process