



Department  
of Energy &  
Climate Change

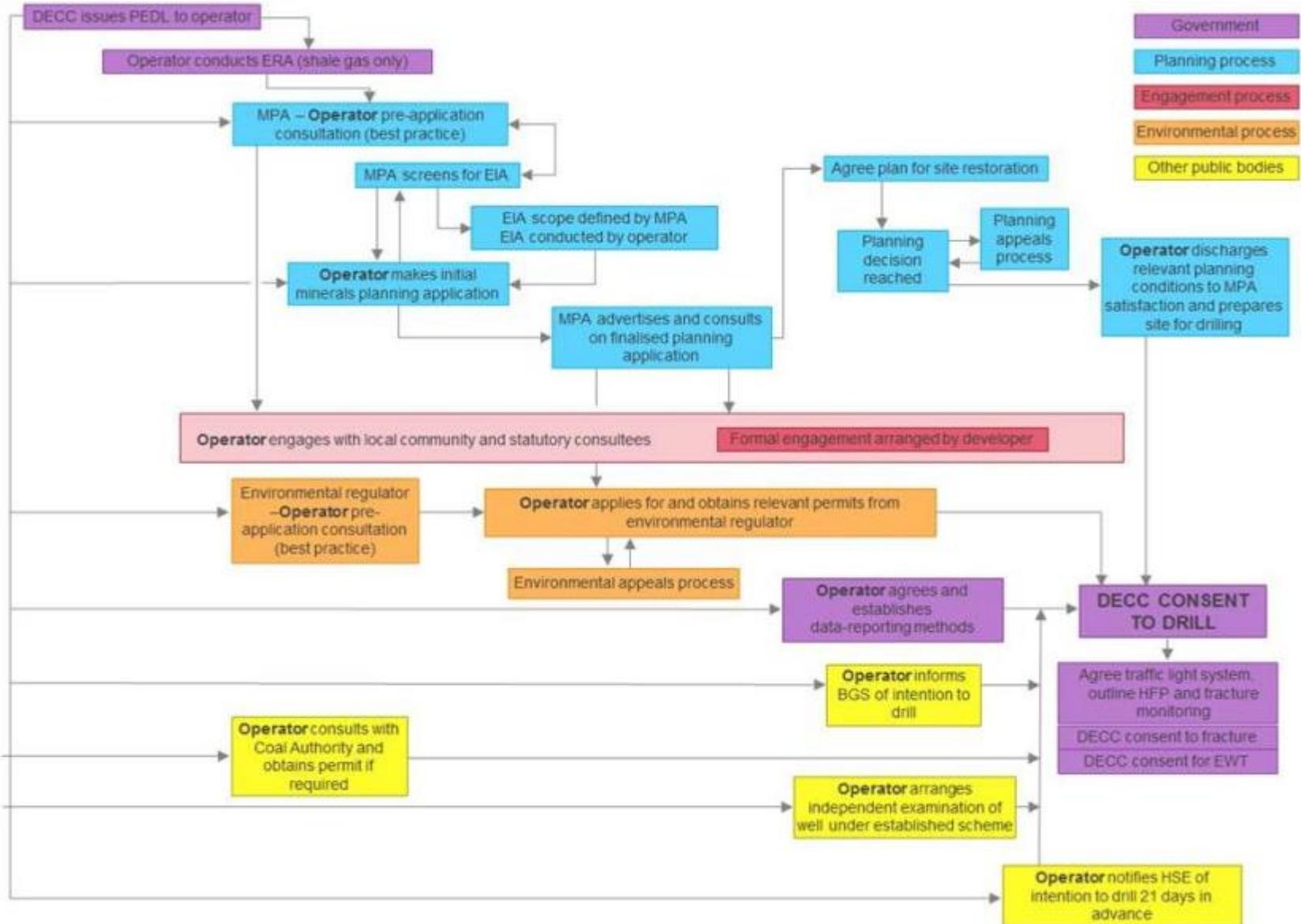
# Shale gas in the UK

Regulatory framework

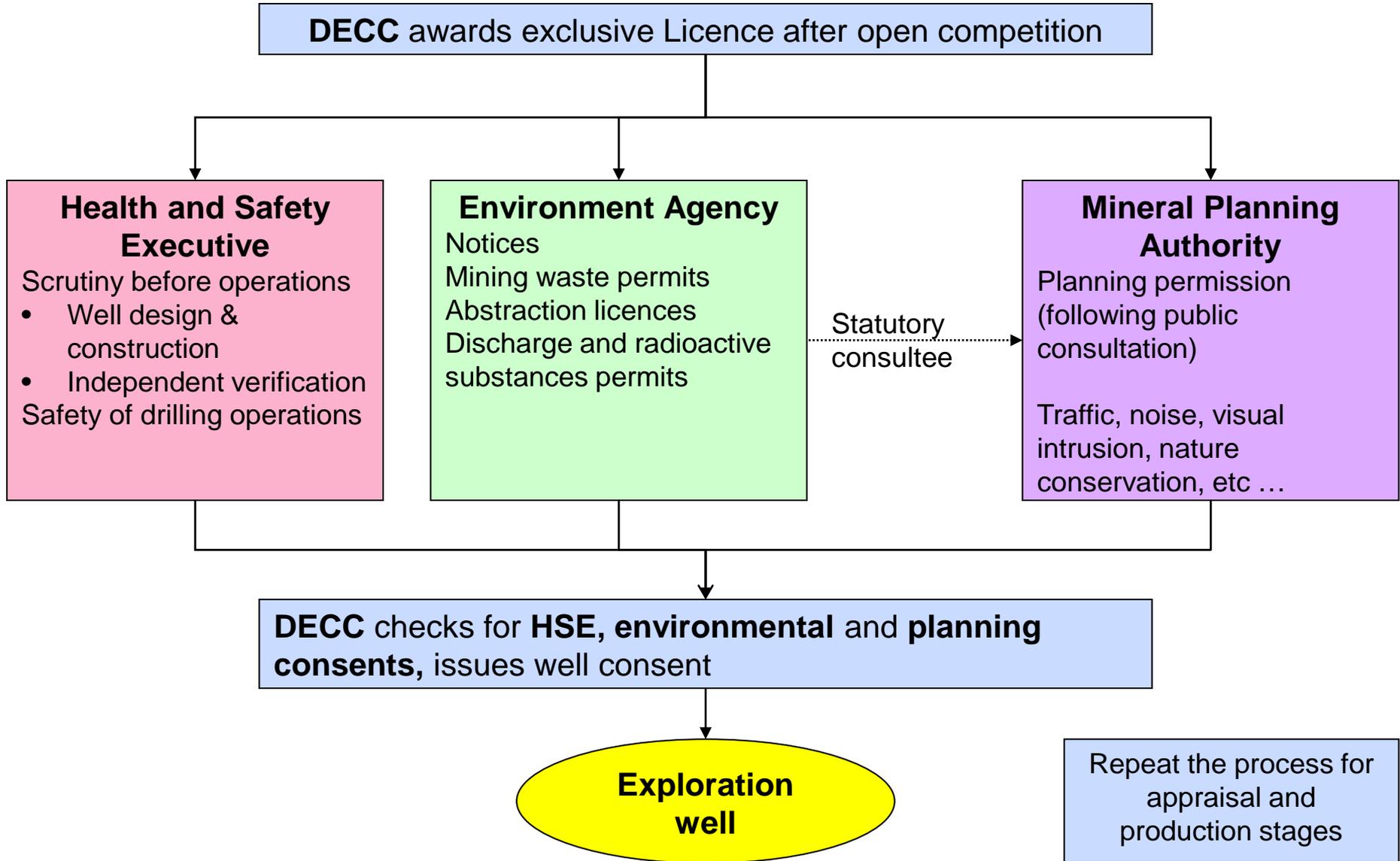
**West Sussex Oil and Gas Exhibition**

8 November 2014

# Regulatory process - exploration



# Regulatory process - exploration





**west  
sussex  
county  
council**

**Making a  
difference**

# **Planning regulation of onshore hydrocarbons**

**Michael Elkington**  
Strategic Planning Manager

**Oil and Gas Exhibition**  
8 November 2014

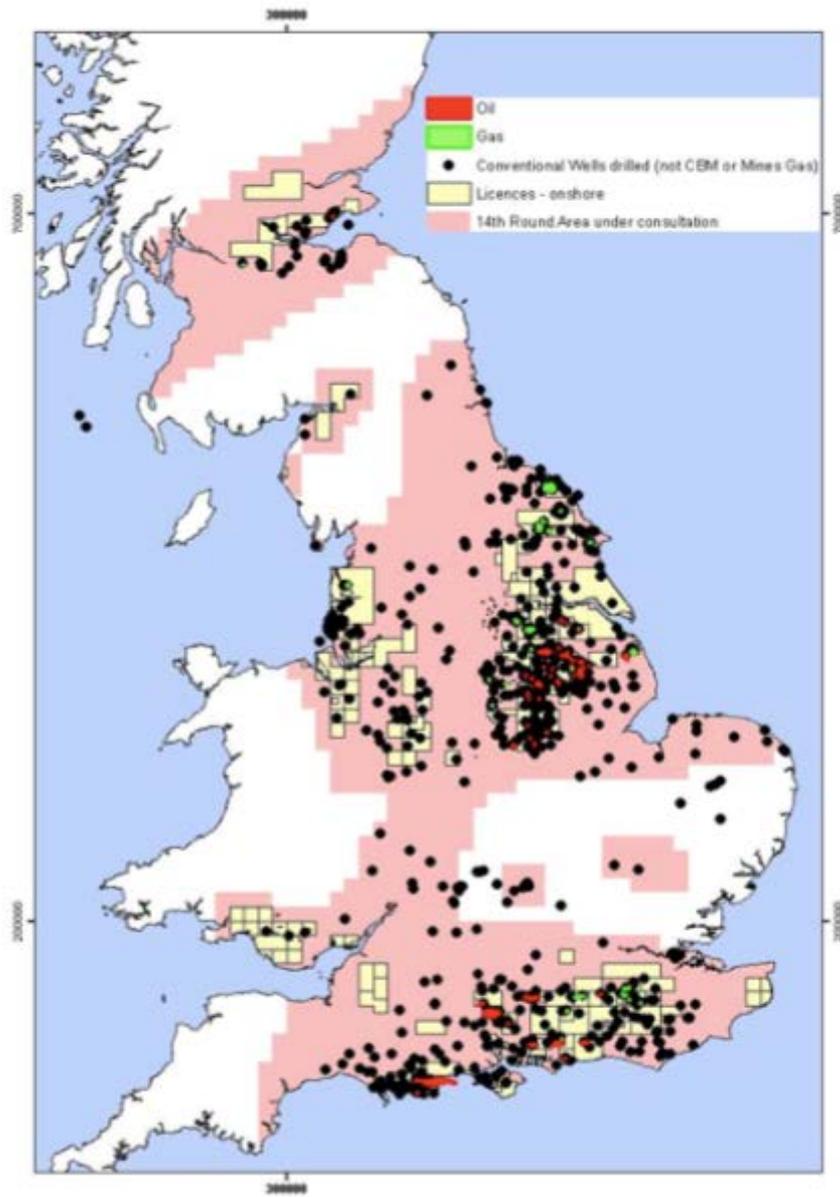
# Roles and Responsibilities



# Mineral Planning Authorities

- Two MPAs cover West Sussex:
  - County Council (for areas outside the South Downs National Park)
  - South Downs National Park Authority
- Two main functions:
  - to prepare a Local Plan which guides the use and development of land for onshore hydrocarbon extraction
  - to determine planning applications for onshore hydrocarbon extraction

# National Planning Policy



# National Policy & Guidance

- MPAs should make provision for the extraction of nationally important resources:
  - which include oil and gas
- Extraction should not have an unacceptable adverse impact on natural or historic environment, or human health
- Pressing need to establish whether unconventional hydrocarbons are present and economically viable for production

# Three Phases of Extraction

- Exploration:
  - exploratory drilling following seismic surveys:
    - short-term but intensive activity
- Testing and Appraisal:
  - may involve additional seismic work, flow-testing, or the drilling of new wells
  - relatively short-term but depends upon resource
- Production:
  - drilling of wells at existing or new sites
  - long-term (e.g. 20 years)

# Local Planning Policy



# West Sussex Minerals Local Plan

- Adopted in 2003:
  - part of the statutory 'development plan'
  - used for decision-making unless policies are out-of-date or the plan is 'silent'
- Policy 26:
  - criteria-based i.e. not site or area specific
  - identifies the need to address alternative sites and acceptability:
    - focus on impacts on countryside, HGVs, residential amenity, rights of way, and water supply/environment
- Under review jointly with SDNPA

# Planning Application Process



# Planning Application Process

- Planning permission is required for each stage of extraction:
  - but one planning application can cover more than one phase.
- MPA cannot pre-determine whether a proposal should be permitted or refused
- MPA must treat proposals on their merits:
  - taking into account the statutory 'development plan' and all other 'material considerations'

# 'Material Considerations' inc.

- Consistency with national and local policy
- Views of consultees, landowners, and public
- Landscape and visual impact
- Local amenity and health
- Highway capacity and road safety
- Historic environment
- Ecology and biodiversity
- Water environment & flood risk
- Site restoration and aftercare

# Not 'Material Considerations'

- Demand for, or alternatives to, onshore oil and gas resources
- Emissions, control processes, or health and safety issues that are addressed under other regulatory regimes:
  - MPA must assume that non-planning regimes will operate effectively
- Potential future planning applications
- Landownership and other civil matters
- Loss of property value

# Non-Planning Issues e.g.

- Seismic risks – DECC
- Well design, construction, and integrity – HSE
- Mining waste – EA
- Chemical content of fracking fluid – EA
- Flaring or venting of gas – DECC/EA:
  - but MPA consider noise and visual impacts
- Disposal of water following fracking – EA
- Abstraction of water – EA

# Compliance and Enforcement



# Controlling Development

- Monitor compliance with conditions:
  - site visits (announced and unannounced)
- All possible breaches are investigated:
  - work with other regulators
- Action is discretionary:
  - as far as possible, use negotiation and seek informal resolution
  - any formal action must be appropriate & proportionate

# Environment Agency

## Regulatory approach to oil and gas exploration

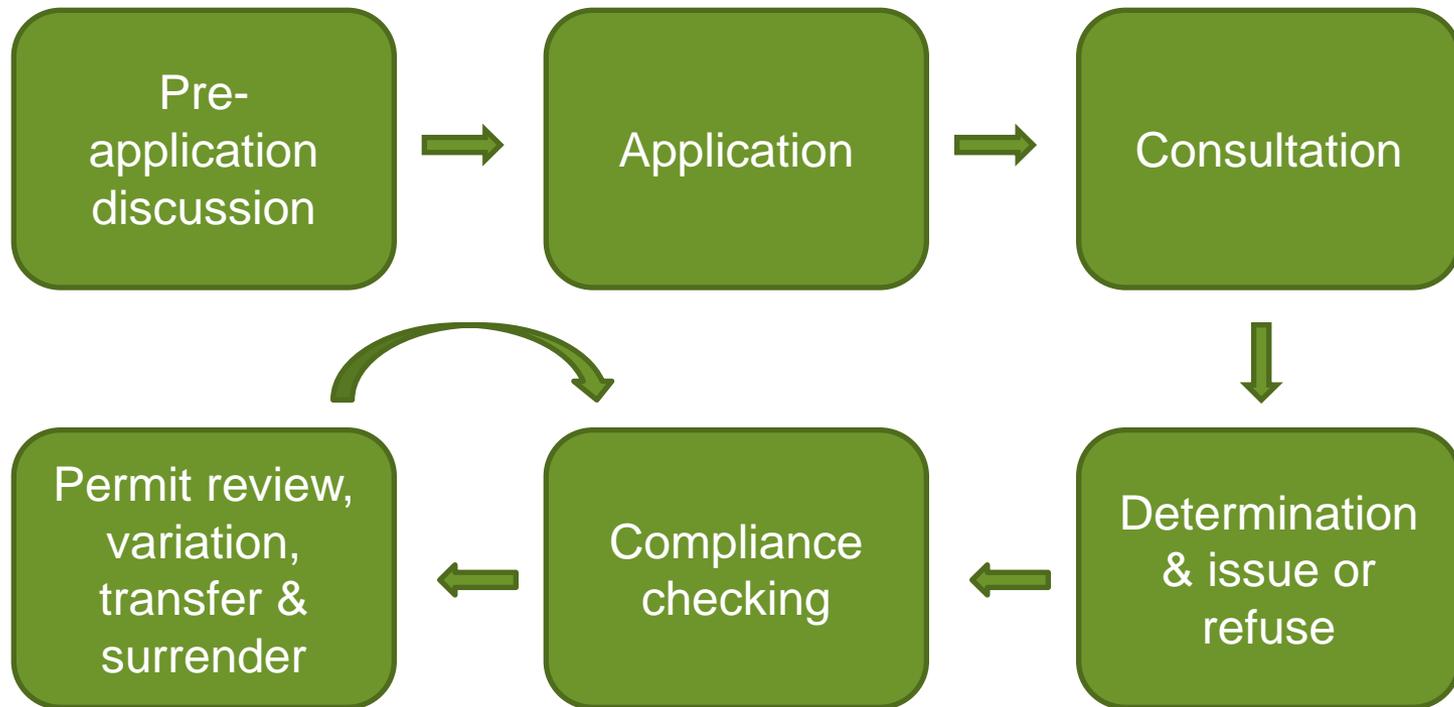
West Sussex Oil & Gas Workshop 8 November 2014

Paul Batty, Danny Lee and Michael Turner

# Permits that may be required

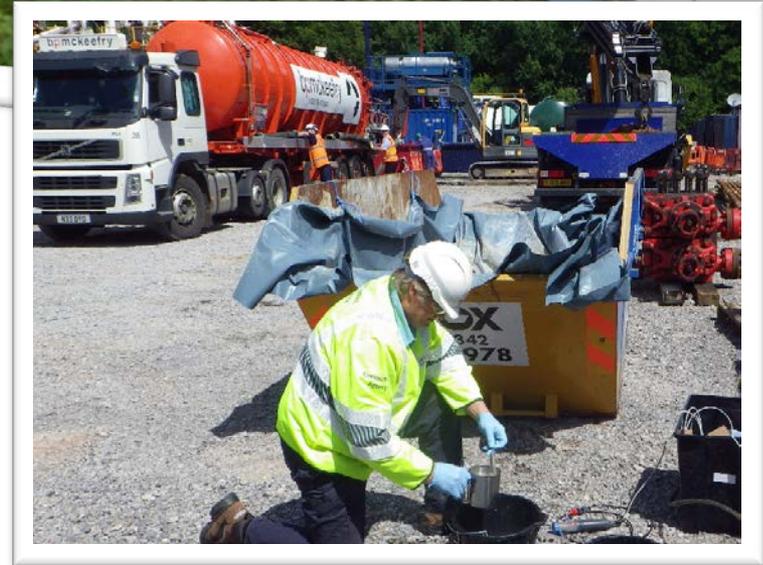
Permit	Reason
Section 199 Notification	Notification of intent to drill a borehole for minerals
Mining Waste Activity	Gas emissions and drilling waste
Abstraction Licence	Water abstracted for use in the process
Groundwater Activity	Direct discharges to groundwater
Water Discharge Activity	Direct discharges to surface water
Radioactive Substance Activity	For any naturally occurring radioactive substances resulting from oil & gas production
Industrial Emissions Activity	For large scale flaring

# The permitting process



# Permit conditions: Water environment

- ➔ Drilling additives – technical assessment
- ➔ Well design – groundwater protection
- ➔ Impermeable membrane
- ➔ Surface water drainage
- ➔ Storage of materials, chemicals and fuels
- ➔ Environmental monitoring e.g. surface water



# Permit conditions: Air quality



- ➔ Controlled under the mining waste permit
- ➔ Operator may be required to carry out air quality monitoring
- ➔ Flaring better than venting
- ➔ Flare design meets best available technology

# Permit compliance checking

On Public Register:

- ➔ Inspection visits
- ➔ Environmental monitoring visits
- ➔ Audit of operator records

Plus, we ensure:

- ➔ Regular communications with the operator, other regulators and general public
- ➔ Following up reports of pollution



# The Regulatory Framework for shale gas

Tony Almond

Health and Safety Policy – Shale Gas

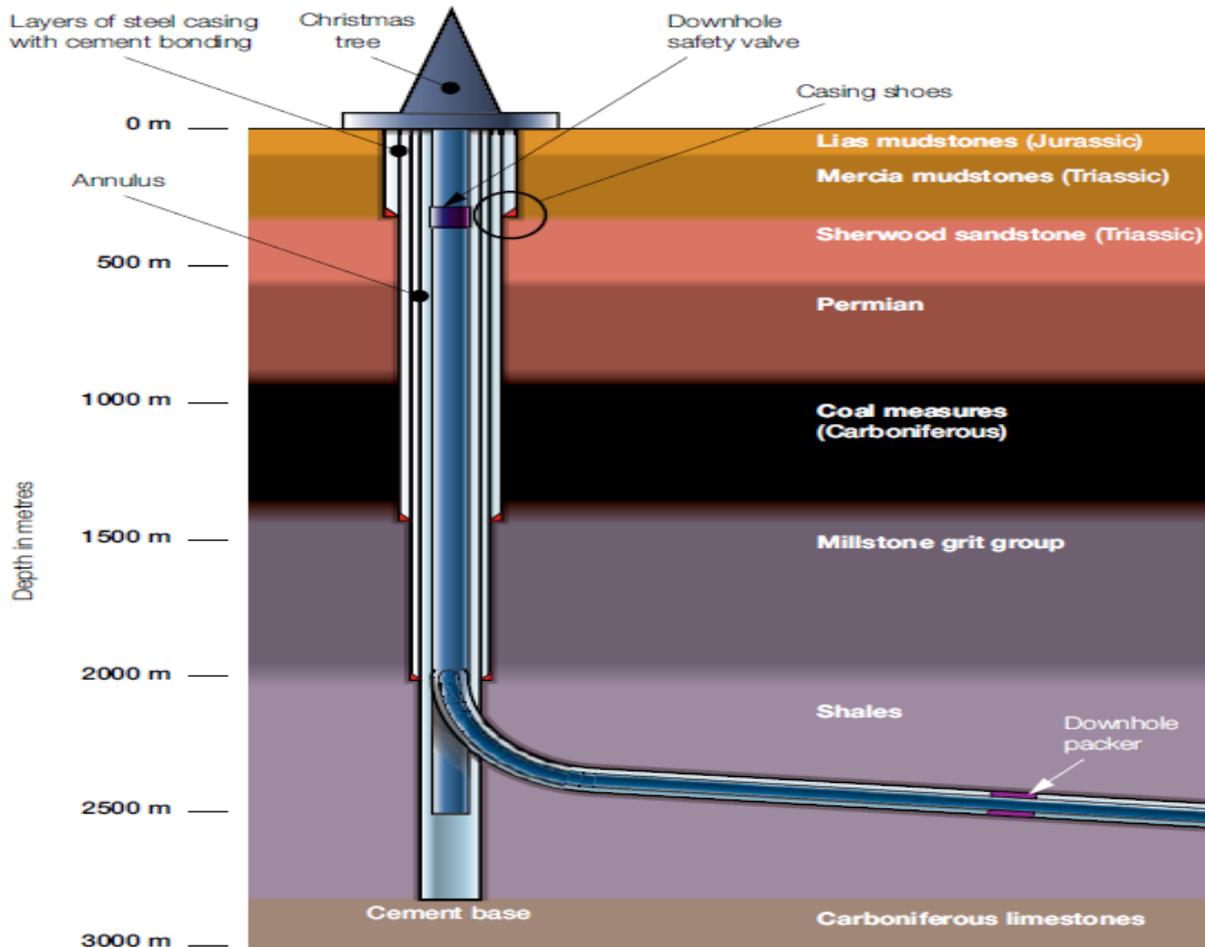
Health & Safety Executive

# Health and Safety Executive's role



# So what are the main hazards?

Diagram of typical shale gas well - testing phase (illustrative only)



# The health and safety regulatory regime



# How does HSE conduct interventions?



**Industry standards**

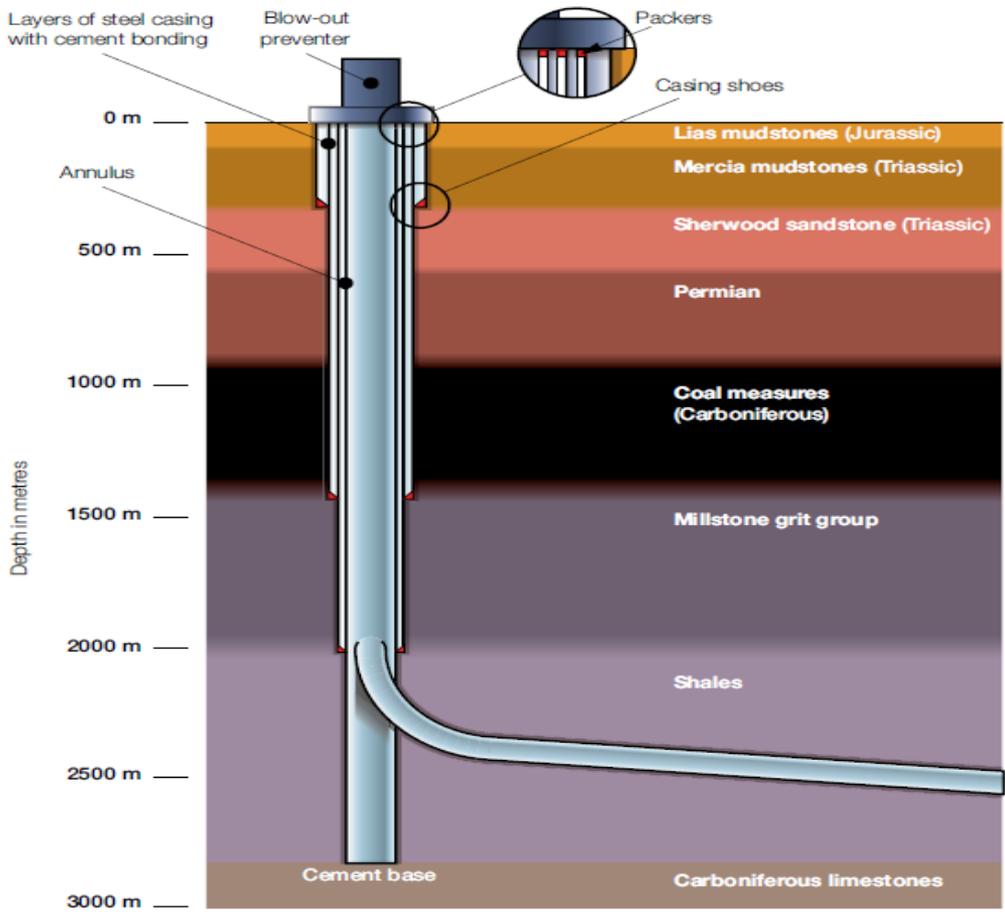
**Inspection activity –  
wells and operators**

**Lifecycle approach**

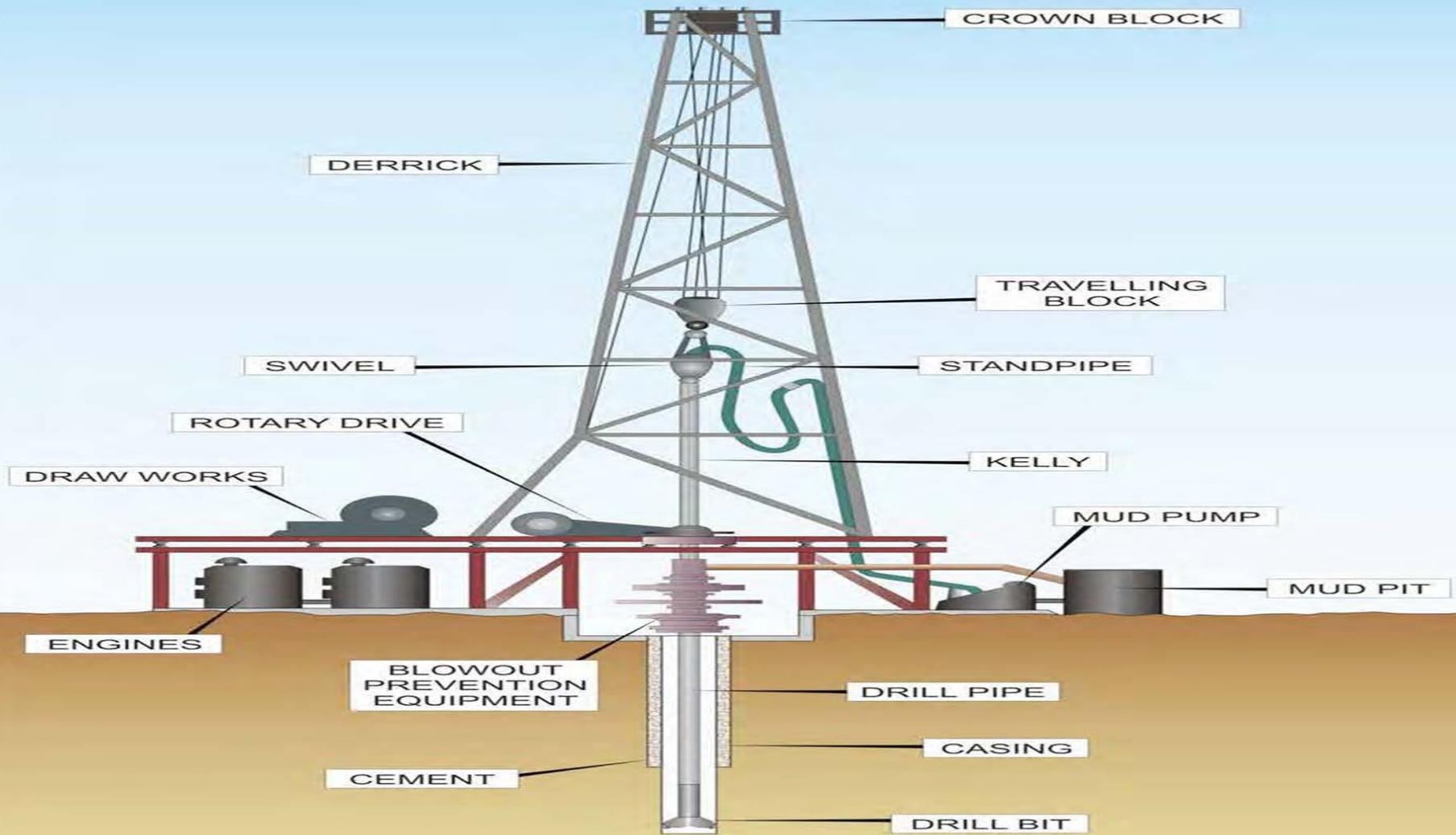
**Joint Regulation**

# Designing the well - notification

Diagram of typical shale gas well - construction phase (illustrative only)



# Designing the well - notification



# Constructing the well - weekly report

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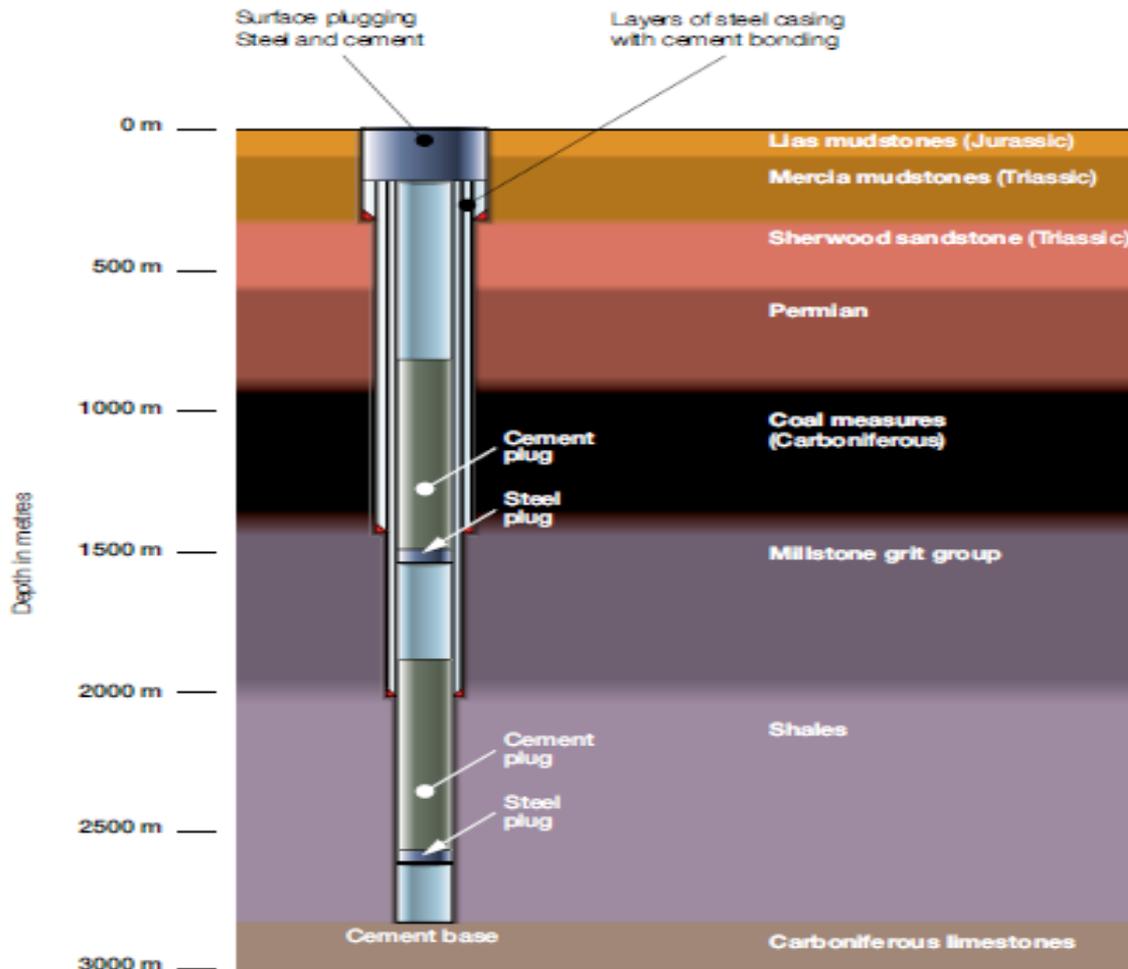
Details of;

- activity since the work started or since the last report,
- the diameter and depth of the borehole,
- the diameter and depth of the casing,
- drill fluid density

**Purpose** - to check against information in the notification and that the pressure in the well and the well's stability is as expected.

# Decommissioning/ Abandonment

Diagram of typical shale gas well - abandonment (illustrative only)



# The independent well examiner

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- Important quality control for the industry
- Independent competent person
- Assess well design, construction and maintenance.
- Review the proposed and actual well operations to confirm they meet the operator's policies and procedures, comply with HSE's Regulations and follow good industry practice.
- HSE checks that the operator has these arrangements in place for the complete lifecycle of the well from design through to final plugging and decommissioning

# Summary



- The health and safety regime
- How HSE regulates
- How HSE and other regulators work together
- Independent Well Examiner



**west  
sussex  
county  
council**

**Making a  
difference**

# **Public Engagement in Planning Processes**

**Michael Elkington**  
Strategic Planning Manager

**Oil and Gas Exhibition**  
8 November 2014

# New Minerals Local Plan

- Informal consultation on issues and options, background papers, etc (Reg 18)
- Public consultation on draft plan for a minimum period of six weeks (Reg 18)
- Publication of 'proposed submission draft' plan (Reg 19):
  - six weeks to allow representations about legal compliance and 'soundness' of the draft plan
- Public Examination:
  - objectors have the right to present their case

# Planning Proposals

- Pre-application stage:
  - applicants encouraged to undertake early community consultation prior to submission:
    - ... but there is no requirement to do so
- Planning application stage:
  - County Council exceeds minimum legal requirements for publicising applications
  - minimum of 21 days allowed for representations by the public:
    - all material matters raised are taken into account before an application is determined

# Planning Committee

- All applications for hydrocarbon extraction will be determined by the Planning Committee:
  - committee meetings are held in public
  - public speaking by supporters and objectors is allowed
- If application is permitted, Committee may seek the formation of site liaison group:
  - forum for local community to:
    - raise issues and concerns about site operations
    - be kept informed about future proposals

# Balcombe



# How it Began

- 1986 - Conoco
  - Establish a drill pad
  - Find oil
  - Not commercially viable flow rate
- 2010 – Bolney Resources Ltd
  - Application to re drill exploratory well at Balcombe
- 2011 - ‘Earthquakes in Balcombe’ - poster campaign
  - December 2011
- 2012 – ‘Balcombe’s Riches’ Public Meeting
  - January 2012



# Balcombe's Riches



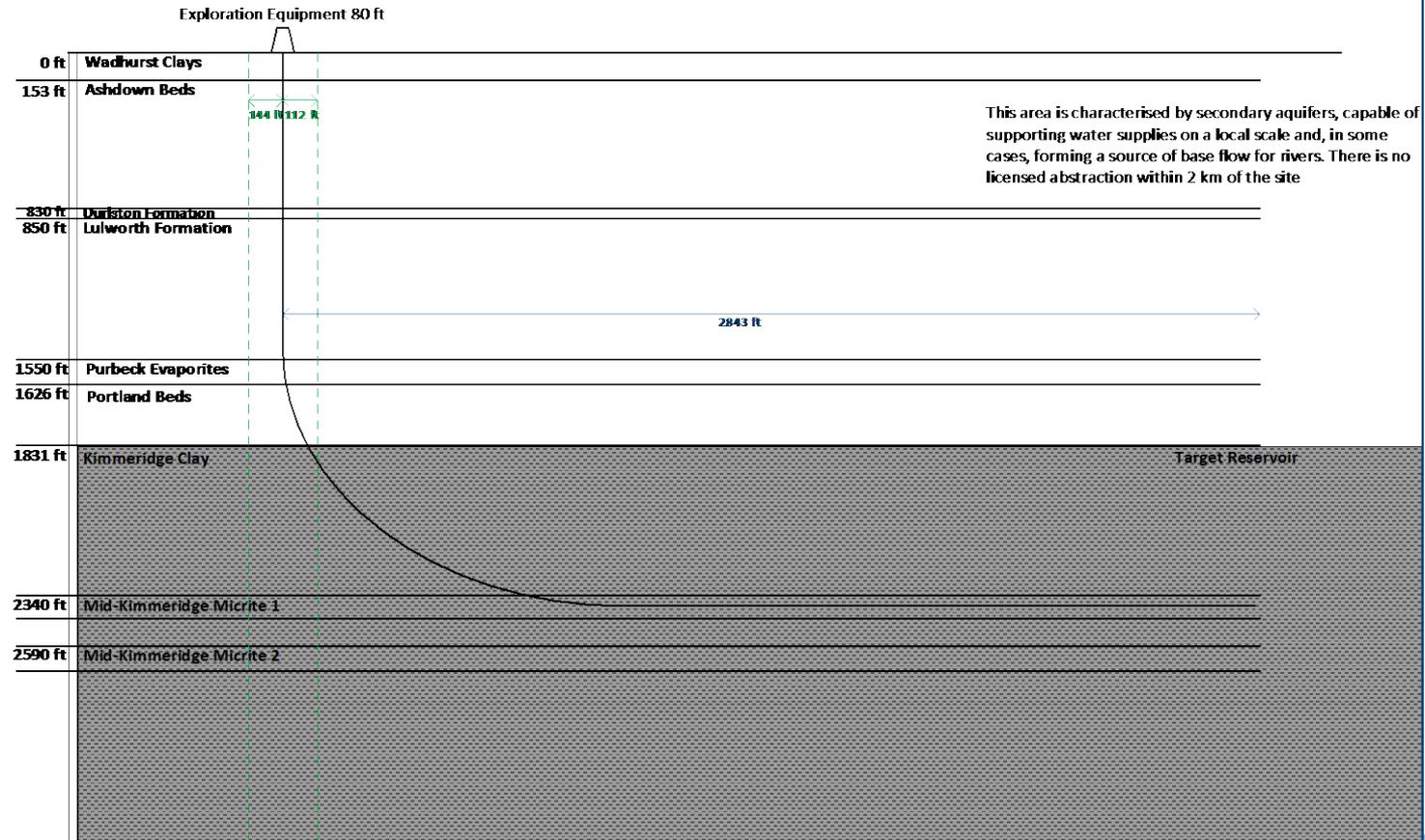
# Location Plan



# Target Formation

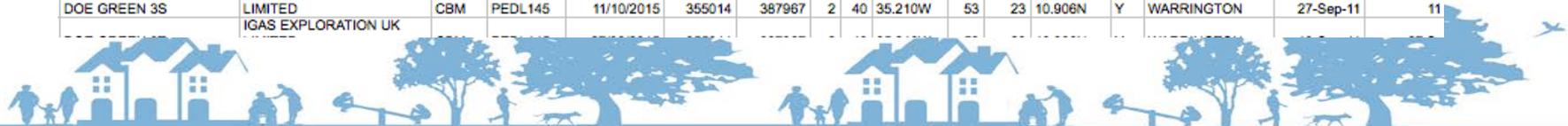
Quadrilla

Balcombe (Lower Stumble) – Vertical prospecting well with horizontal extension



# 2160 Landwells - Aug 2013

NOOKS FARM 1Z	REVUE ENERGY UK LIMITED	COG	PEDL141		391745	358031	2	7	23.995W	53	7	08.777N	V	STAFFS	08-Aug-13	
BALCOMBE 2	CUADRILLA RESOURCES LIMITED	COG	PEDL244		531021	129243	0	7	50.350W	51	2	49.340N	V	W SUSSEX	02-Aug-13	
EBBERSTON MOOR B1	VIKING UK GAS LIMITED	COG	PL077		493450	488727	0	33	57.645W	54	17	08.308N	V	N YORKS	11-Jul-13	
WEST NEWTON 1	RATHLIN ENERGY (UK) LIMITED	COG	PEDL183		519272	439150	0	11	14.111W	53	50	04.868N	Y	YORKS	27-Jun-13	
KIRBY MISPERTON 8	VIKING UK GAS LIMITED	COG	PL080		477136	479004	0	49	08.613W	54	12	03.628N	V	N YORKS	06-Jun-13	
WYTCH FARM B11	PERENCO UK LIMITED	COG	PL89		397345	85798	2	2	21.626W	50	39	59.122N	Y	DORSET	25-May-13	
CRAWBERRY HILL 1	RATHLIN ENERGY (UK) LIMITED	COG	PEDL183		497670	437721	0	30	57.445W	53	49	34.876N	Y	YORKS	15-Apr-13	
AIRTH 14	DART ENERGY	CBM	PEDL133	04/03/2017	286652	685969	3	49	12.739W	56	3	11.454N	Y	CLACKMANN	12-Feb-13	0
AIRTH 13	DART ENERGY	CBM	PEDL133	04/03/2017	286286	685701	3	49	33.446W	56	3	02.489N	V	CLACKMANN	12-Jan-13	0
WYTCH FARM M22	PERENCO UK LIMITED	COG	PL089	27/02/2018	401114	85951	1	59	03.258W	50	40	21.510N	Y	DORSET	04-Nov-12	27 F
WYTCH FARM M21	PERENCO UK LIMITED	COG	PL089	21/02/2018	401114	85951	1	59	03.258W	50	40	21.510N	Y	DORSET	29-Oct-12	21 F
ANNA'S ROAD 1	CUADRILLA RESOURCES LIMITED	SG	PEDL165	21/11/2016	335374	430980	2	58	50.390W	53	46	15.340N	V	LANCS	06-Oct-12	21 N
KIRBY MISPERTON 7	VIKING UK GAS LIMITED	COG	PL080	03/01/2018	477110	478930	0	49	04.152W	54	12	00.536N	Y	N YORKS	06-Sep-12	03
EALAND 1	DART ENERGY	CBM	PEDL174	06/09/2016	476915	410614	0	50	22.531W	53	35	11.411N	V	LINCS	12-Aug-12	06 Sep
FORMBY 7	AURORA EXPLORATION (UK) LIMITED	COG	PEDL164	15/08/2016	331936	408270	3	1	40.157W	53	33	58.964N	V	LANCS	23-Jun-12	1 F
SINGLETON X12V	PROVIDENCE RESOURCES UK LIMITED	COG	PL240	04/07/2017	488403	115455	0	44	30.733W	50	55	52.367N	Y	W SUSSEX	02-Jun-12	
FORMBY EAST 1	AURORA EXPLORATION (UK) LIMITED	COG	PEDL164	20/06/2016	332412	408435	3	1	13.825W	53	34	08.419N	V	LANCS	01-Jun-12	
SINGLETON X12W	PROVIDENCE RESOURCES UK LIMITED	COG	PL240	02/06/2017	488403	115455	0	44	30.733W	50	55	52.367N	Y	W SUSSEX	09-May-12	
WYTCH FARM F25	PERENCO UK LIMITED	COG	PL089	07/06/2017	401065	85733	1	59	05.739W	50	40	14.457N	Y	DORSET	01-May-12	
WYTCH FARM L14X	PERENCO UK LIMITED	COG	PL089	08/04/2017	401336	87026	1	58	51.915W	50	40	56.319N	Y	DORSET	24-Mar-12	
SINGLETON X12X	PROVIDENCE RESOURCES UK LIMITED	COG	PL240	09/05/2017	488403	115455	0	44	30.733W	50	55	52.367N	Y	W SUSSEX	21-Mar-12	
WYTCH FARM L14Y	PERENCO UK LIMITED	COG	PL089	07/04/2017	401336	87026	1	58	51.915W	50	40	56.319N	Y	DORSET	15-Mar-12	
WYTCH FARM L14Z	PERENCO UK LIMITED	COG	PL089	07/04/2017	401336	87026	1	58	51.915W	50	40	56.319N	Y	DORSET	07-Mar-12	
SINGLETON X12Y	PROVIDENCE RESOURCES UK LIMITED	COG	PL240	21/03/2017	488403	115455	0	44	30.733W	50	55	52.367N	Y	W SUSSEX	22-Feb-12	2
WYTCH FARM L14	PERENCO UK LIMITED	COG	PL089	07/03/2017	401336	87026	1	58	51.915W	50	40	56.319N	Y	DORSET	19-Feb-12	0
SINGLETON X12Z	PROVIDENCE RESOURCES UK LIMITED	COG	PL240	22/02/2017	488403	115455	0	44	30.733W	50	55	52.367N	Y	W SUSSEX	21-Jan-12	22 F
GEDLING 2	ALKANE ENERGY UK LIMITED	MG	PEDL225	19/01/2016	461173	343922	1	5	18.991W	52	59	19.775N	Y	NOTTS	16-Dec-11	19
SINGLETON X12	PROVIDENCE RESOURCES UK LIMITED	COG	PL240	21/01/2017	488403	115455	0	44	30.733W	50	55	52.367N	Y	W SUSSEX	07-Dec-11	21
INCE MARSHES 1	IGAS EXPLORATION UK LIMITED	CBM	PEDL190	31/01/2016	346211	376439	2	48	24.663W	53	16	54.905N	V	CHESHIRE	04-Nov-11	31
BECCONSALL 1Z	CUADRILLA RESOURCES LIMITED	SG	PEDL165	21/12/2015	340636	422976	2	53	57.380W	53	41	58.629N	V	LANCS	13-Oct-11	21 D
DOE GREEN 4	IGAS EXPLORATION UK LIMITED	CBM	PEDL145	25/02/2016	355018	387974	2	40	35.014W	53	23	11.146N	Y	WARRINGTON	10-Oct-11	25 F
DOE GREEN 3S	IGAS EXPLORATION UK LIMITED	CBM	PEDL145	11/10/2015	355014	387967	2	40	35.210W	53	23	10.906N	Y	WARRINGTON	27-Sep-11	11
	IGAS EXPLORATION UK															



# What we did

- **Working Group Set Up**

- BPC is made up of Working groups
- Parishioners with relevant knowledge or experience sought.
- Co-opted by 'CV'

- **Membership**

- House Wife (PC)
- Solicitor
- Geologist
- Chemist
- Civil Engineer (PC)
- Banker (PC)
- Wine Journalist (NoFibs )
- Construction Project Manager (PC)
- Environmentalist
- Driller



# Fact Finding

- **Objectives**
- To obtain and review information on the benefits and risks associated with the proposed exploration for and extraction of oil or gas at the Lower Stumble site and which may involve the use of the “fracking” technique.
- To prepare a report on the subject to be made available to the public.

## **Spoke with**

- Cuadrilla
- DECC
- EA
- WSCC
- MSDC
- Singleton PC
- Flyde BC

## **Failed to Engage**

- HSE
- South East Water
- Network Rail



# The Balcombe Report

## FRACKING



## The Balcombe Report

- An 8 page, easy to read, summary
- Delivered to every house in the Parish, with feedback form
- Posted on the new PC website
- Q&A follow-up document

## The First Poll

- Delivered to (nearly) every house in the Parish
- Returned to the box in the Village shop
- Results posted on the PC website



# Poll 1 Results- 2012

A polling card was delivered to every residence in the Parish 284  
polling cards out of 1700 population had been returned.

234 (82%) – Oppose Fracking

30- Not Oppose Fracking

16 – No strong views, 4 polling cards were invalid

*REASONS ; Increase in road traffic through the village 46*

- *Pollution of water supplies 36*
- *Impact on the environment 28*
- *Risks, but no benefits, for Balcombe 27*
- *Too many unknowns 23*
- *Impact on an Area of Outstanding Natural Beauty 15*
- *Effect on property values 14*
- *Tremors, landslip or subsidence 14*
- *Ethical considerations 11*
- *Effects on the railway infrastructure 8*



# Parish Council Policy Statement

‘The Parish Council will have no direct role in any decision making on whether or not fracking will be permitted within the Parish.

However the **majority** view of those residents who participated in the fracking poll is quite clear and the Parish Council will promote this view if and when any exploration for oil involving fracking is proposed within the Parish.’

*THE BPC will **OPPOSE FRACKING IN THE PARISH***



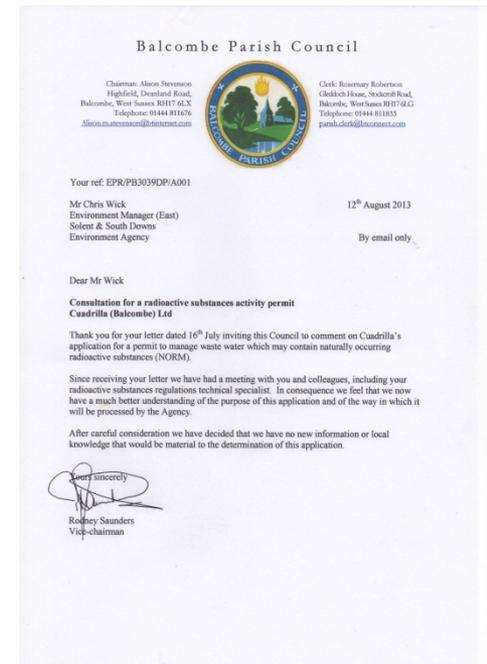
# The Waiting Game

- **Through Autumn 2012 – Spring 2013**
  - ‘No Current plans for Balcombe’ – *Cuadrilla*
  - BPC kept in contact with the DECC and Cuadrilla
- **Cuadrilla are Coming**
  - Opinion surveys, undertaken by Cuadrilla in March 2013
  - April 2013 – Invitation to meet. Cuadrilla met with WSCC and BPC and then on the 8<sup>th</sup> May 2013, simultaneously with BPC minutes publication, announced the start of exploration activities.
  - May 2013 – Cuadrilla drop in Bramble Hall



# Work Starts

- **Working Group** re-convened
- Clear mandate to oppose
- Practical remit to liaise, monitor and influence
- Met with **EA** to explore the **Waste Mining Permit Application** – June 2013
- *Submitted response - July 2013*
- Met with **EA** to explore the **Radio Active Substances Permit** –Aug 2013
- *Submitted response -August 2013*
- **Amended Flare Planning Application** –  
*Submitted response to WSCC*
- **Cuadrilla start on site 23<sup>rd</sup> July 2013**



# Protests Start

Small scale protests,  
tea parties, music by  
the roadside,  
children's picnics –  
Very local



Protest grew by the  
day as drilling starts  
23<sup>rd</sup> July 2013, tents, a  
kitchen, loos from  
friends of the Earth



# Media Media Media

## The Worlds Media arrives



BBC, ITV, Sky, Al Jazeera, Radio 5 Live, Radio 4 Today Programme, The One Show, Telegraph, Sun, Guardian, New York Times, Times, Independent.....

## No Fibs Organise –

March from the village –  
entitled ‘meet the camp’

- 100 Villagers



# Road Side camp



# Loos and Nanas



# Festivities and Blockade



# Police



# Camp and Drill Pad



# Escalation

- **NO DASH FOR GAS**
- A public meeting held on 9<sup>th</sup> August in the Parish Room.
- Presented plans for large scale camp in Balcombe -1000 attendees ?
- Mixed reception
- After discussion with Parishoners attending and consultation with NoFibs members, BPC issues an open letter **'un-inviting'** the camp



# Fear of Harm

BPC Posters  
urging peaceful  
protest put up all  
over village.

5 Banners erected  
in village at entry  
points by BPC

Banners  
vandalised within  
hours

The 82% issue  
becomes a larger  
problem

**Balcombe is**



**against FRACKING  
and**



**against ILLEGAL  
ACTION**

***So please respect OUR  
VILLAGE by respecting  
the LAW***



# August 2013 – Met Officers



# August 16 - 20<sup>th</sup> - 2013



# August 2013



# Arrests



# Arriving by train



# Drillers behind the wire



# Community Tensions Rise

- The Middle of August was the tipping point
- Everything changed.
- Community Tensions increased
- Intolerance Increased
- Much Less about Balcombe
- Continuous Blockade of the Road
- Yellow ribbons increasingly removed.
- Posters taken down
- Neighbour Tensions
- New Poll called for



# Information, Dialogue and Lobbying

- **Parish Council Website was key.**
  - In August in daily hits 3500 from 50 countries
  - Worlds Press
  - Locals
- **Police**
  - Stakeholder briefings,
  - Community Liaison
- **WSCC**
  - Resilience
- *All involved multi-agency input, Police, Fire and Rescue, Water Company, WSCC, Mid Sussex DC, Environment Agency*



# Particular Issues

- **Noise**
  - WSCC / MSDC led to noise baffles
- **Traffic Past the school**
  - Cuadrilla/ Police failed to affect practice
- **Diversion Routes**
  - Police – rerouted to avoid residential streets
- **Discoloured Water**
  - SEW – explanation and publicity



# Cuadrilla Leaves

28<sup>th</sup> Sept 2013

Having drilled the bore but  
**NOT**  
flowed the well.



# Events

- **Meet the Environment Agency**
  - **Oct 2013**
  - BPC organised a Public Meeting in the Parish Church (our largest meeting place) to enable residents to learn about Regulation and ask questions of the EA
  - 260 tickets, all taken
  
- **WSCC Presentation – The Planning Framework**
  - **Dec 2013**
  - In the church
  - 150 tickets taken
  - Q&A session



# Flow Test Application

- **Review** - January / February 2014
  - Working Group review of Planning Application to assess or flow test the exploration well
  - FFBRA Input on Noise and Air Quality
- **New Poll** - February 2014
- **Response to Application**
  - Written Response document to WSCC– March 2014
  - Verbal Representation at WSCC Planning Committee Meeting – April 2014



# Poll 2 - Results

- **Postal Poll by the Electoral Reform Society**
  - 1500 eligible Voters
  - 900 returned forms – 59.8% of electorate
  - 3 questions
- **Results**
  - **60%** of votes said Oppose Flow Test Application,  
40% did not (support/merit/don't know)
  - **61%** said oppose any future activity involving Fracking,  
39% did not (support/merit/don't know)
  - **51%** said oppose any future activity NOT involving Fracking,  
49% did not (support/merit/don't know)



# What Now

- Flow Test Application was PASSED in April
- Back to the waiting game
- ‘Unlikely to undertake any work this year’ – *Cuadrilla*
- Judicial Review Underway - FFBRA vs WSCC
- Events, journalists, academics.



# Cheerful Stuff



# Spot the star

