

BRENT E-NEWS

Brent Decommissioning Project

Welcome to the seventh in the series of regular communications from the Brent Decommissioning Project Team

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www.shell.co.uk/brentdecomm



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New phases for Brent Decommissioning as the project moves from “select” to “define” phase

Einstein famously said: “If I had one hour to save the world, I’d spend 55 minutes defining the problem and only five minutes finding the solution.”

In some ways, this aptly describes the last four years for the Brent Decommissioning team. As the project moves from Select phase into Define phase, the scope of both our study work and our stakeholder engagement programme to date - discussed in more detail inside this newsletter - leads me to believe that we’ve listened to and learned from the past, and that we are seeking the best possible outcome for the project.

We appreciate the feedback we have received in its many forms. One key area of stakeholder focus has been cell contents and remediation. We have yet to conclude our work on the options here, and in order to inform any proposed solutions, we are seeking to better understand the nature and characteristics of the cell’s contents by trying to undertake a cell survey in 2012. This is not without its challenges, as my colleague, John Gillies, explains in more detail on [page 7](#).

As we move forward with this huge and highly-complex project, it is important we bear in mind that there are no easy solutions, but some solutions are better than others. And only by balancing a range of considerations that go beyond technical feasibility to also include safety, the environment and socio-economic impact, will we achieve a robust and positive outcome for decommissioning the Brent field.

Austin Hand
BRENT DECOMMISSIONING PROJECT DIRECTOR



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CONTACTUS

For further information on the Project, please visit www.shell.co.uk/brentdecomm or get in touch with the team via the ‘**Contact Us**’ link on the website.

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Staying engaged

Q&A with the Stakeholder Manager

This autumn, our Stakeholder Dialogue sessions continued with meetings in London and Aberdeen on 20th and 22nd September. Here, the project's **Stakeholder Manager Jim Niven** answers some frequently asked questions, and **Suzannah Lansdell** and **Erica Sutton**, from **The Environment Council**, share some feedback on the stakeholder engagement process.



Jim, why does the Brent Decommissioning Project engage with stakeholders?

Two things that we have learnt from the past were how important it was for any project of this kind to start a dialogue with its stakeholders at an early stage, and that in addition to the technical and cost considerations, a wider, more sustainable view must be taken of the potential safety, environmental and socio-economic impacts the project will have. We began engaging with a group of stakeholders at the beginning of 2007, in the very early days of the project. That group has now grown to around 150 organisations. Stakeholders' input enables us to listen and reflect a far wider range of issues and aspirations into decommissioning considerations. Engagement with stakeholders is recognised good practice both within Shell and externally, and in fact it is encouraged

by the Department of Energy and Climate Change (DECC) in its decommissioning guidelines.

Who are the stakeholders?

The full list of organisations is published on our website, www.shell.co.uk/brentdecomm, and includes government departments, unions, environmental and other non-government organisations, academics, business groups and trade associations across a range of sectors. In addition we engage separately with media, politicians and the supply chain.

How do you engage with them?

Our primary tool has been to hold multi-stakeholder dialogue events to which we invite the full range of stakeholders. These are facilitated by The Environment Council, a UK registered charity which has a strong track record in stakeholder engagement and a very pragmatic people-focused approach. To date we have held twelve events - six sets of each in Aberdeen and London - and these have typically taken the form of presentations on key topics by the project team, followed by discussions and breakout sessions to obtain feedback from the stakeholder participants on the content and format of the meetings.

The events - and indeed all our methods of engaging with stakeholders - are designed in response to the feedback we receive from our stakeholders. For example, at our dialogue events in June and July 2010, we introduced a 'souk session' format, which enabled attendees to engage directly with individual project team members specialising in key topic areas

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- an opportunity that some stakeholders had previously indicated would be welcome. The engagement process graphic (**see page 4**) gives a brief outline of our core activities so far. However we have many other ways in which we communicate with our stakeholders over and above these events. The project's Independent Review Group (IRG), established in 2007 under the chairmanship of Professor John Shepherd FRS, is multidisciplinary with members having a depth of relevant experience in science, engineering, industry and academia. The IRG has also been actively involved in the dialogue sessions, giving update presentations on its work in reviewing the science and engineering technology of the Brent Decommissioning studies. One of its roles, if requested, is to ensure that all relevant stakeholder comments are being addressed within the scope of each study where practical to do so.

Another engagement method is via our public website, which has been in operation for well over three years. On the website we publish information about the project and full transcripts, by The Environment Council, of the dialogue sessions. Following requests from stakeholders, last year we introduced a version of the dialogue sessions online, with videos of the presentations and the slidepacks used. This approach has proved valuable in encouraging responses from as many stakeholders as possible. A key feature of our website is a Contact Us email facility open to all. The IRG also has its own independent website within the Shell public site.

We also communicate regularly via Brent E-Newsletter, a link to which is sent to

stakeholders, and which is also published on the website, and by direct email to provide stakeholders with information, such as a more detailed response to questions raised at the dialogue sessions.

Finally, we meet face-to-face with those stakeholders who wish to discuss anything in more detail with us.

What is the stakeholder feedback regarding engagement so far?

Stakeholder feedback on the engagement process is also available on our website and I am pleased to say that by and large, it is very well appreciated. Generally, our stakeholders understand the challenges and complexities of the project and recognise that we are making a lot of effort to engage with them throughout the various stages.

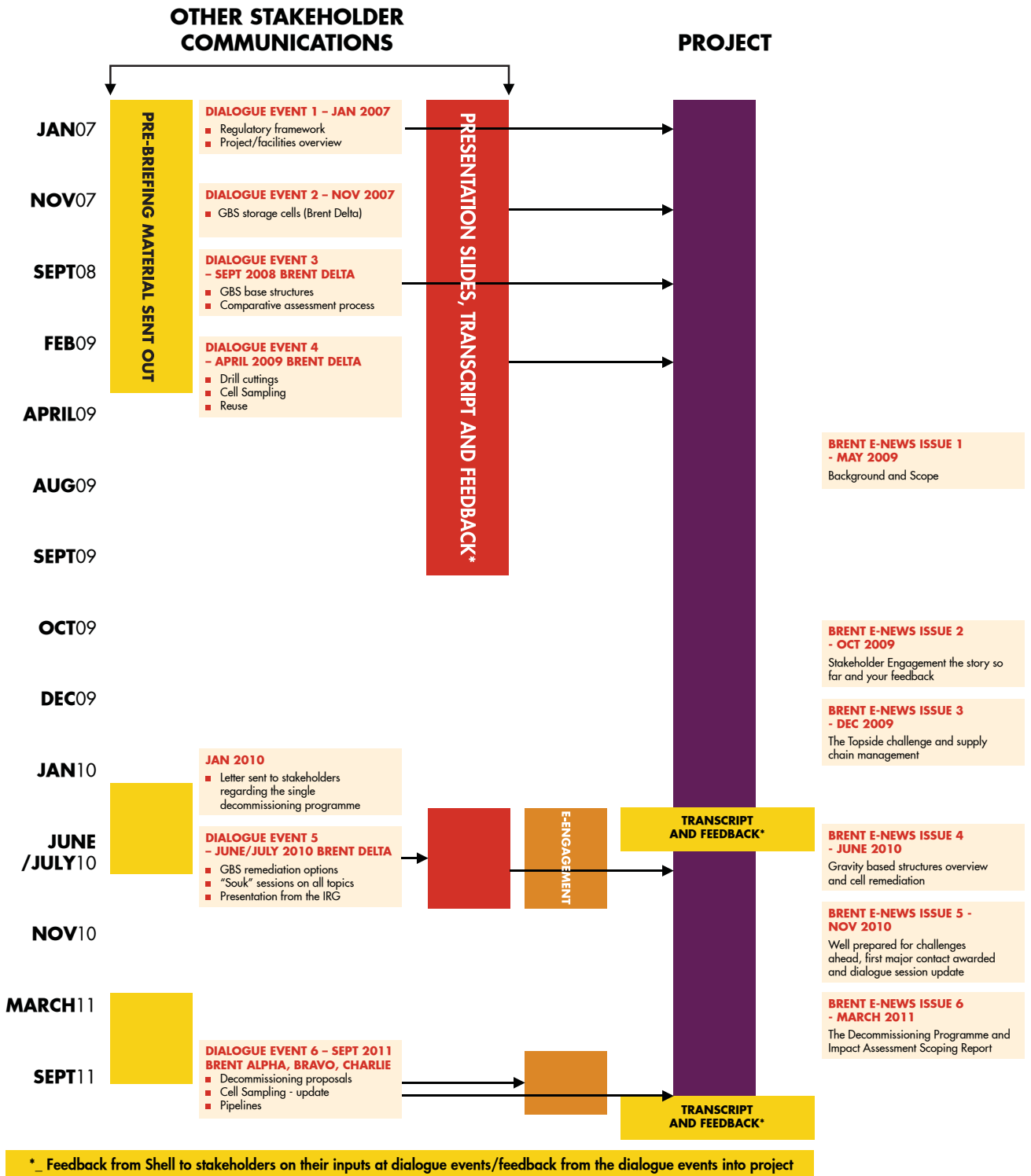
What was on the agenda at the September 2011 stakeholder dialogue sessions?

To date, most of the sessions have centred on Brent Delta, as it will be the first platform to be decommissioned and is the focus of the majority of our studies. However, in preparation for the Decommissioning Programme which will cover the decommissioning of all four Brent platforms, we looked at Brent Alpha, Bravo, and Charlie, identifying where there are similarities and how they differ from Brent Delta. We also provided an update on one of the biggest challenges - what to do with the gravity base structure (GBS) storage cell contents - around the survey work that is being planned (**see page 7**) and the modelling studies that will be carried out to explore various content scenarios.

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Staying engaged

Q&A with the Stakeholder Manager



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Stakeholder feedback snapshot

Experience and reflections of stakeholders

An insight into the experience and reflections of stakeholders who have participated in the dialogue sessions to date is given in the evaluation feedback gathered by The Environment Council at the close of each event. A collation of this feedback is included in the respective workshop reports, available at www.shell.co.uk/brentdecomm.

Feedback from out 2010 events includes:

In 2010, 84% of participants in the dialogue workshops felt their expectations of the company on openness and transparency were fully met.

"The Shell representatives appeared to be open and willing to share information and take on board feedback to inform their decision-making process".

In 2010, 62% of participants felt their expectations in relation to the provision of accurate and timely information had been met, with the remainder, 38%, saying it had been partially met.

"My impression was that the information was very accurate and timely, and that Shell is committed to providing more if needed/requested."

How far stakeholders consider that their views and concerns are being, or will be, adequately addressed by Shell has been evaluated throughout the dialogue. In 2010, on a scale of 1 to 5, where 1 was "not at all" and 5 was "very confident", 65% of participants rated 4s and 5s, with the remainder (35%) rating 3s.

"Shell representatives came across as willing to listen and take on board comments."

Jim Niven comments: "The issues that stakeholders have raised have generally already been on the project's "radar", but it is good to get their feedback and thinking to include in our thinking for the project."

Some examples where stakeholder comments are shaping our work include:

- Developing the cell survey project at an early stage (rather than later into decommissioning) to get into a storage cell on Brent Delta to better evaluate what is inside
- Continuing to study the possible removal of the concrete legs on the GBS structures although this option is not preferred
- Our engagement and communications activities, including stakeholder events and e-Newsletters, have been tailored in the light of feedback by stakeholders
- Addressing the long-term monitoring and actions should any structure(s) be left in place.

The stakeholder events are held under the "non attribution" rule.

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Stakeholder feedback snapshot

Experience and reflections of stakeholders

“The whole stakeholder engagement process is about informing and improving the decision-making process that Shell and its partners will go through in planning their ultimate proposals for the Brent field decommissioning. It’s also about having no surprises on the part of Shell, its partners or any of the stakeholders, for Shell to listen to, respond and reflect stakeholder inputs into their decision making processes. Ultimately it’s about trying to maximise the fact that whoever the stakeholders may be, and regardless of whether they come to the workshops, have one-to-one briefings, visit the website, or engage in the electronic process, that they know exactly what’s happening at every stage of the project and that they have the opportunity to have a voice in that process - to feed in their views, concerns, issues and aspirations.”

Suzannah Lansdell,
The Environment Council

“The relationship we have with the Brent team really feels like a partnership and we can be completely open and honest with each other. The biggest challenge is with the scale of the project and condensing down what is a huge and complex technical area of study into something that can be accessible to stakeholders in a day. We’ve therefore been putting stronger emphasis on providing information to people in advance and really thinking of how best to present information at the events - a process that is very much shaped by stakeholder feedback on previous sessions.”

Erica Sutton,
The Environment Council



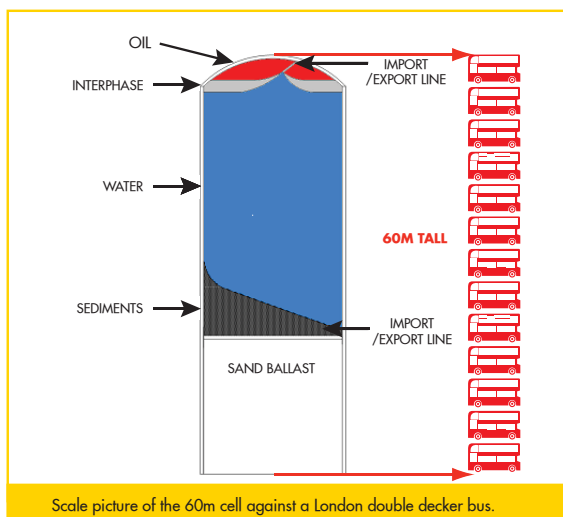
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Cell sampling update

A dedicated team from the Brent Decommissioning Project has made significant progress towards obtaining the early data from inside the cells that will inform a key project decision on what to do with the storage cell contents of the three Brent GBS platforms.

In the coming months, an unprecedented campaign will be mobilized offshore to enter the cells on the Brent Delta GBS and recover samples from the sediment expected to lie at its base. The complex process will use remotely operated vehicle (ROV) technology to deploy and operate equipment. This technology has been designed, developed and tested for the project by specialist contractors over the last year.

The challenges faced by the cell sampling project - which is expected to cost tens of millions of pounds - can hardly be overestimated, given that the base of the GBS oil storage cells lies 150m below the surface of the Northern North Sea. The cells themselves are 60m deep.



Brent Decommissioning Project Execution Manager, John Gillies, explains how it has all come about:

"At the stakeholder dialogue sessions in June and July 2010, Shell presented two concept scenarios for the contents of the storage cells at the base of the Brent field GBS platforms, Delta, Bravo and Charlie. These focused on "remove and treat" and "leave sediments in place". However, there was an important missing element in the decision-making process - the cell sediment sample data. We had no accurate information because the cells could not be entered during the 30 years of operating life. We explained that, from our knowledge of the produced fluids, we expect to find sediment at the bottom that has settled-out over the years. But we made it clear that we really could not be certain what was there, and in what quantity, or what the composition of any sediment might be."

"We also clarified that obtaining these samples prior to topsides removal would be a considerable technical challenge. It's not a case of simply lowering a bottle on a wire!"

John continues: *"Since then, recognising the need for obtaining cell sediment samples in order to move forward with this part of the project, and being cognisant of stakeholder emphasis on this topic, Shell and its partners have committed significant resources to enable real progress towards shedding light on what the cell contents consist of."*

The Cell Survey project team, led by John Madden, is working with North Sea Underwater Services Contract partner Subsea 7, and a number of specialist

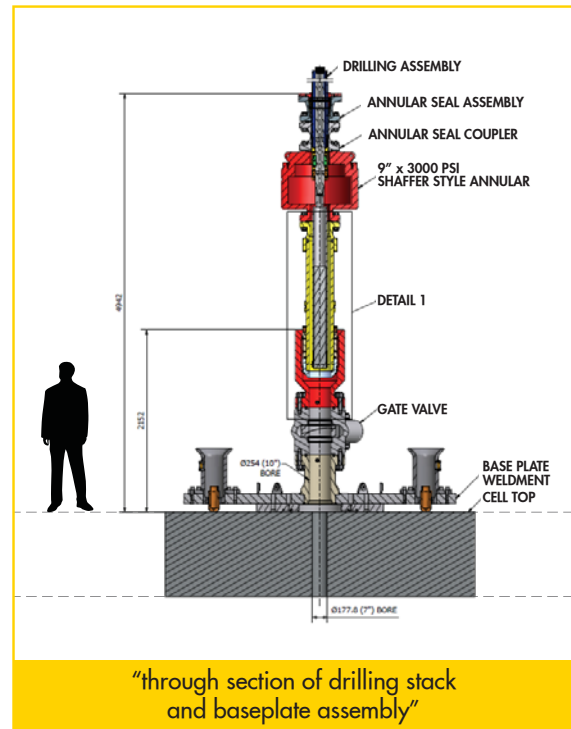
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Cell sampling update

contractors to develop bespoke equipment capable of drilling through the top of the reinforced concrete structures, which are more than one metre thick, and then lowering surveying and sampling tools down through the cells.

"Nobody has done this type of cell sampling before and so this is a bespoke application," says John, "We are using the knowledge we have and the experience of contractors who specialise in this kind of technology, and we're deploying it in a new way. You could say this reflects what we're doing at overall project level; it's all about capitalising on the experience we've built up and using it in new ways."

The equipment development trials have been running for a number of months over the summer period. In the coming months the work will be executed offshore in two distinct campaigns. In the first phase, it is planned that divers will install, at the top of the storage cell, the base plate, valve and seal assembly for the new ROV-operated drilling stack. The second more complex phase will involve the drilling and sampling. During this second phase a sonar tool will map the surface contours of the sediment layer. This will be followed by deploying other specialist tools to assess the physical condition of the sediment and obtain samples before physical samples are recovered to the support vessel. The samples will then be sealed and transported onshore for full laboratory analysis.



"Some information will be available very quickly, but it will be well into 2012 before we have a completed comprehensive analysis. This will then be one of the factors that will help to inform our decision about what to do with the cell contents," says **John Gillies**.

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Extensive number and range of studies to inform key project decisions

As a matter of good practice, Shell applies the Opportunity Realisation Process (ORP) to all its projects. This process has a series of phases called Identify, Assess, Select, Define and Execute. Following a period of extensive feasibility studies and concept selection spanning four years, the Brent Decommissioning Project has now entered the Define phase, during which the project teams will work out the scope, method and cost of executing the main concepts for the overall decommissioning process.

"The concepts - and the options from which they have been selected - are underpinned by some 430 in-depth technical studies, which in turn are supported by nearly 70 comprehensive studies focusing on the health, safety, environmental and socio-economic impacts of each of the options being explored."

"Hundreds of Shell, its partner and contractor personnel have been involved in these detailed decommissioning studies, clocking up hundreds of thousands of project man hours".

The studies are grouped under the main headings of:

- **Cell Remediation (158 studies):**
e.g. what is inside the GBS storage cells, what could the contents consist of, what are the options for dealing with these?
- **Cell Survey Project (79 studies):**
e.g. what are the options for entering the storage cells to remove samples?
- **Gravity Base Engineering (75 studies):**
e.g. what is the size and weight of the GBSs? Can they be floated and towed? How can they be disposed of? Can they be left in place?
- **HSE Management (67 studies):**
see page 10 for further detail
- **Removals Engineering (77 studies):**
e.g. how can the platform topsides be removed, taken to shore and deconstructed?
- **Subsea (25 studies):**
e.g. how will the GBS external sea risers be removed and disposed of? How are the pipelines cleaned? Are they removed or left in place? How are they left in place to ensure a safe marine environment?
- **Technical HSE (4 studies):**
e.g. how and when can the platforms' safety critical equipment be removed safely?
- **Topsides Engineering (91 studies):**
e.g. how and when will all the various elements of the platforms be dismantled?

Engineering Manager, Mike Smith, who is responsible for all the front-end work covering the full scope of the Brent Decommissioning studies through Select to the end of Define, explains: "The studies are far-reaching and explore a wide range of options for each area of the project. The numbers alone don't portray the full picture in terms of the amount of work behind them, as many individual studies represent only several hundred man hours of work while others represent tens of thousands of man hours.

"The results of all these studies support our decision-making, so that during the Define phase the scope is narrowed right down to what we are actually going to do. However, the amount of work involved within that refined scope then immediately starts to escalate, since Define generally means focusing on one option for each area and getting all the information you need in order to understand how it's going to be executed, how long it's going to take and how much it's going to cost. The exception to this is cell remediation where we are still working two options. This information will ultimately inform and influence the Final Investment Decision (FID) at the end of Define."

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Strong HSE focus Playing a central role



The environment is a key factor in the way in which the overall Brent decommissioning programme will be executed and therefore the full spectrum of environmental - together with safety and socio-economic impact - considerations have been taken into account throughout the scope of the decommissioning studies.

Playing a central role in ensuring this is the project HSE team, which, as described in the last issue of Brent E-News, is responsible for preparing the Environmental Impact Assessment (EIA) and Decommissioning Programme documents.

"Throughout the project everyone has had to be very clear that whichever option we choose is being carried out for some very transparent safety, environmental, and socio-economic benefits and that these are going to be realisable,"

says **Environmental Specialist Gordon Picken.**

As well as providing input into the technical studies, the team has taken forward a programme of 67 separate reports focusing specifically on HSE aspects, ranging from safety risks to fishermen and waste management, to energy use and a sustainable development plan.

"In addition to these theoretical studies, we've had separate drill cuttings and environmental baseline survey work carried out in the field, which will be followed up just before decommissioning work commences and again when the activities have been completed,"

explains **Environmental Specialist Ann Montgomery.**

"The cumulative body of HSE work, carried out both internally and by third party contractors, has formed the basis for the scoping report for the EIA and for the EIA itself, the results of which will in turn inform the Decommissioning Programme we submit to DECC,"

HSE Manager Gwyn Roberts concludes.

IRG Update

The Independent Review Group (IRG) provides peer review of the quality of the Brent decommissioning studies. The final responsibility for the contents of the reports rests with their authors and with Shell, and the IRG does not necessarily support or endorse every statement in the individual study reports. The independence of the IRG is ensured by the IRG, or any of its members, having the right to publish its/their findings, including any objections.

The IRG met in Aberdeen, in June, and reported the following status on document reviews:

Total documents reviewed	163
Total comments received	1450
Comments requiring response	1073
Responses completed	997
Responses sent to IRG	869
Responses accepted by IRG	615
Resulting further actions	131
Closed further actions	120
Comments received in last 3 months	24