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# Shelley Field Decommissioning Programmes Close Out Report

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## 1.0 INTRODUCTION

#### 1.1 Scope of Document

The scope of this document is to report on the outcome of the Decommissioning Programmes for the Shelley Field installation and pipelines, as described in document number SH-OP-PL-0003 Rev B5 (June 2010).

#### **1.2 Background to the Project**

The Shelley field is located in Block 22/02b and 22/03a of the United Kingdom Continental Shelf (UKCS), approximately 192km from the northeast coast of Scotland and 32km from the UK/Norway median line, see Figure 1-1.



#### Figure 1-1 Shelley Field Location

Premier Oil UK Limited (Premier) are the Operator and have a 100 per cent interest in the Shelley Field.

Before the decommissioning activities commenced, the Shelley field facilities comprised of two production wells with Xmas trees and fishing-friendly protective structures, and a subsea production manifold inside a protection structure. These were tied back to the Sevan Voyageur FPSO by a 2.02km trenched and rock dumped 8" production pipeline and a 2.42km trenched electro/hydraulic control umbilical, which were located in a 10m wide corridor between the production manifold and the FPSO, see Figure 1-2.



#### Figure 1-2 Shelley Field Layout



Since production began in August 2009, the performance of the Shelley wells did not meet expectations. The reservoir pressure fell significantly and the proportion of water in produced fluids rose much quicker than anticipated. The field quickly became sub-economic so Premier sought cessation of production (COP) in July 2010. The Decommissioning Programme was submitted in accordance with the requirement of the Petroleum Act 1998 (document number SH-OP-PL-0003 Rev B5) and approved in June 2010. Programme 1 covered the FPSO, manifold and wells, while Programme 2 covered the pipeline, umbilical and jumpers. The associated decommissioning activities were completed during 2010 and 2011.

Premier Oil UK Limited were the sole owners of the field, the wellheads and the subsea infrastructure tied back to the Sevan Voyageur FPSO. The FPSO was leased to Premier Oil from Sevan 300PTE Limited (Sevan); the Sevan Voyageur FPSO and the associated mooring systems were solely owned by Sevan.

Premier Oil are solely accountable for the Section 29 notice encompassing the pipeline, umbilical and associated jumpers. Sevan and Premier are accountable for the decommissioning activities of the FPSO and its mooring system as included in the Section 29 notice for the FPSO, manifold and wellheads. However Sevan have no liability for the manifold and wellheads, which are the sole responsibility of Premier. Premier are accountable for the wellhead and manifold; furthermore, as the licence holder Premier are responsible for ensuring that the field has been fully decommissioned in accordance with the Decommissioning Programme described in document number SH-OP-PL-0003 Rev B5 (June 2010).



#### 2.0 PROGRAMMES OF WORK

#### 2.1 **Proposed Programmes of Work**

As described in Section 2.2 of the Shelley Field Decommissioning Programmes (SH-OP-PL-0003 Rev B5), the proposed programmes of work were as follows.

With the exception of the production pipeline, all the facilities and infrastructure in the field would be removed from the seabed in accordance with OSPAR decision 98/3. Before decommissioning operations began, the wells, wellheads, jumpers, manifold and the whole production pipeline would be flushed to remove hydrocarbons. Flushing would continue until the concentration of residual oil in water in the pipe was less than 40ppm. Flushed materials would be pumped to the FPSO for treatment and disposal under appropriate permits, and the pipeline would then be filled with treated seawater. The impacts of all the chemicals used or discharged offshore during pipeline cleaning would be assessed and reported to DECC in a separate PON15C. Similarly, the hydraulic fluid and other chemicals in the umbilical would be flushed and returned to the FPSO for disposal under appropriate permits.

The Sevan Voyageur FPSO would be towed away for further use at another location. The production riser, manifold, and all the jumpers would be lifted from the seabed and taken ashore for refurbishment prior to re-use. Similarly, the cables and anchors used to moor the FPSO would be retrieved and either re-used or disposed of responsibly. All the concrete mattresses that protected the subsea facilities would be retrieved to shore, for recycling or disposal as appropriate.

A drilling rig would be moved to the site to carry out the routine programme of work required to plug and abandon the wells. The well casings would then be cut at a depth of about 3m below the seabed and taken ashore for re-use or recycling. The impacts of all the chemicals used or discharged offshore during well plug and abandonment would be assessed and reported to DECC in a separate PON15D.

As required by the Petroleum Act 1998, a detailed Comparative Assessment was completed to identify the best options for decommissioning the pipeline and umbilical. Options were comprehensively analysed and compared on the basis of their safety risk, environmental impacts, CO2 emissions, technical feasibility and cost. This assessment indicated that the best option for the pipeline would be to remove the short exposed sections lying on the seabed, and leave the remainder of the line in its trench, protected and enclosed by the existing layer of rock-dump. For the umbilical, which was trenched but not protected by rock-dump or backfill, the best option would be to remove the whole line in several sections and take it ashore for recycling or disposal as appropriate.

#### 2.2 Preparatory Work and Removal of Subsea Infrastructure

The Shelley Decommissioning project workscope started early July 2010 with the mobilisation of project equipment and personnel to the FPSO Voyageur. Preparatory works included the setup of equipment to assist with the disconnection and lowering of the umbilical and production riser.

On the 14<sup>th</sup> of July 2010 Shelley COP was confirmed, which was followed by some umbilical and topside flushing operations and line checks until the DSV Wellservicer started work in the field on the 17<sup>th</sup> of July.



Following successful barrier test operations on well P1Z and well P2S, flushing operations commenced from the DSV via the P1Z tree initially and were completed from the P2S tree. Flushing from the trees ensured that the complete production system including all jumpers, manifold, pipeline, riser and topside pipework could be flushed with inhibited seawater until the residual oil level at the reception facilities was reduced to less than 30ppm. All fluids were captured in the FPSO's slop oil tanks and subsequently transferred to a shuttle tanker as part of the last cargo offload.

After the flushing operations, isolations were put in place and both the umbilical and riser were disconnected from the topside cabling/tubing/pipework. Pulling heads were installed ready for lowering the umbilical and riser through the I-tubes. Simultaneously, the DSV cut off the dynamic section of the umbilical subsea and attached a recovery clamp. The DSV also disconnected the flexible riser subsea and attached a recovery pulling head. Both the umbilical and the flexible riser were then recovered to the DSV by lowering them from the FPSO. At this point, the FPSO was disconnected from the subsea infrastructure, which enabled Sevan to progress with the removal of the FPSO.

The DSV then had some final tasks to complete as part of the 2010 programme to remove the subsea facilities. This involved removing the four protection structure legs from each tree and removing the drop-down spools, so that the wells could be abandoned later on in the year. Before departing the field on the 28<sup>th</sup> of July, the DSV recovered the riser and umbilical clump weights and performed an as-left survey.

Once onshore, the riser, buoyancy modules and clump weights were sold to third parties for re-use, and the dynamic section of the umbilical was disposed of responsibly.

The Voyageur FPSO was disconnected from its moorings on the 22<sup>nd</sup> of August 2010 and towed to Kristiansand. Later on, it was confirmed that the FPSO would be refurbished and redeployed on the Huntington field in 2012. The polyester sections of the moorings were recovered shortly after FPSO disconnection. The anchor chains and 12 suction cans were recovered by Sevan during May 2011. Some of the chains and suction cans were re-used on the Huntington project.

On the 24<sup>th</sup> of May the DSV Orelia mobilised and safely completed the following workscope:

- Disconnected all control and production jumpers from the Shelley manifold.
- Recovered the Shelley manifold, including ballast blocks and roof panels.
- Recovered all concrete mats from the FPSO-end.
- Cut and recovered the rigid production pipeline at both ends, up to the start of the rock dumped section.
- Recovered 60 concrete mats from the manifold-end.

Once onshore, the multiphase flowmeters and SCM were removed from the manifold and shipped back to the vendor for safe disposal of the radioactive sources and general refurbishment. The manifold remains stored in the UK, awaiting a re-use opportunity by Premier or a third party. The recovered concrete mats were re-used as foundations by a third party, while the recovered sections of production pipeline, ballast blocks and roof panels were disposed of responsibly.



The DSV Orelia mobilised a second time on the 13<sup>th</sup> of July and safely completed the following workscope:

- Recovered remaining mattresses.
- Recovered well control jumpers.
- General debris clearance.

Once again, the recovered mattresses were re-used as foundations by a third party and the well control jumpers were disposed of responsibly.

With regards to general debris clearance, at the start of the Shelley decommissioning project Premier's intention was to recover all debris including grout bags and provisions were made accordingly in terms of lifting gear etc. However, as the project progressed it became clear that unforeseen snagging hazards needed mitigation.

First of all, the rigid pipeline was cut as close to the start of the rockdump berm as physically possible, leaving only the minimum length of pipeline required to facilitate installation of the pipeline cutting tool exposed. It was not possible to utilise water jetting methods to bury the pipeline ends without removal of large sections of the rockdump berm, as this methodology requires access to the seabed areas directly below the pipeline, therefore an alternate mitigation methodology was required to remove the potential snagging hazard to the fishing industry.

A number of options to mitigate this risk were considered, including utilisation of grout bag protection, concrete mattress protection or additional rock dumping. The options were assessed on the basis of their safety risk, environmental impacts, CO2 emissions, technical feasibility and cost. Utilisation of grout bag protection was considered the most suitable methodology by all parties for the following reasons:

- 1. It allowed a rounded profile to be formed on the end of the rockdump berm, encapsulating the pipeline end and therefore eliminating the snagging hazard.
- 2. It required the smallest quantity of additional materials to facilitate protection from snagging.
- 3. It presented a low risk of future displacement from fishing interaction, due to the small quantity of grout bags and protection provided from the existing rockdump berm.
- 4. Grout bags that were previously used for supporting Shelley subsea infrastructure could be re-used.

Other unforeseen snagging hazards were small localised seabed craters around the former wellhead locations, probably as a result of the soil collapsing into the hole as the wellheads were removed. It was considered that the remaining concrete/grout plug in the centre of the crater presented a potential snagging hazard to the fisheries fleet.

The DSV, following discussions with Premier, took initial measures to 'infill' these craters utilising the grout bags already available subsea. Whilst this partially mitigated the fishing snagging hazard, it was considered that additional mitigation was required to eliminate this risk in its entirety. A small quantity of rock/gravel mix was therefore mobilised and used to completely infill the craters, leaving a completely level seabed free of fishing snagging hazards.



The manifold protection structure was recovered on the 11<sup>th</sup> of August and once it arrived onshore it was cut up and disposed of responsibly by Premier's waste contractor.

Last but not least, the Fugro Symphony mobilised on the 13<sup>th</sup> of August to recover the static section of the umbilical and all the production jumpers. The work was completed on the 16<sup>th</sup> of August. The vessel then proceeded to carry out a side-scan sonar survey of the entire Shelley site, see Section 3.1, and demobilised on the 19<sup>th</sup> of August. This completed the Shelley decommissioning scope of work.

#### 2.3 Well Abandonment

There were two wells in the Shelley Field: DECC reference number 22/2b-P1Z and 22/2b-P2S. This section presents the abandonment summaries for both these wells, extracted from the individual End of Well reports.

#### 22/2b-P1Z

The Transocean Sedco 704 semi-submersible drilling rig was used to perform the subsurface abandonments. On arrival at the Shelley location on 31/10/10, the anchors were run and winch off drills carried out. The protective canopy and Jumper Deployment Module were recovered from both wells after which the rig was positioned over the P1z well and the BOP run and latched. The THISL (Tubing Hanger Secondary Lock) was recovered before the Expro SSTT and landing string was run and tested.

Recovery of the Crown Plugs followed which was accomplished with some difficulty. The well was killed using 10.0ppg brine with some losses to the reservoir via the flow control valve which was passing fluid. A tubing cutter was RIH on Slickline and the 4-1/2" tubing was severed just above the upper ESP pump at 4859ft.

The Shelley upper completions had  $2x \ 1-1/2$ " thick armoured control cables clamped to the tubing with plastic Polyoil cable clamps from the tubing hanger to the top of the upper ESP.

The well was circulated to clean 9.2ppg brine and a clean-up pill was pumped to remove any hydrocarbon residue from the tubing.

The Expro landing string was pulled. When the tubing hanger was retrieved to surface it was found that both of the ESP cables had parted close to surface. It was subsequently found that the cable clamps had largely disintegrated in hole and the ESP cables were effectively unsupported. Operations continued to retrieve the tubing but at a tubing cut depth of 4460ft no further progress could be made. Circulation brought up large quantities of disintegrated Polyoil cable clamp debris. The tubing was re-cut at 1408 ft, just above the Gas Lift Mandrel. The length of 4-1/2" tubing above the 2nd cut was recovered leaving approximately 2450 ft of armoured ESP cable in hole above the lower section of 4-1/2" tubing. Fishing operations commenced to recover the ESP cables with 6 x Crankshaft Rope Spear runs recovering an estimated 2530 ft of cable. The lower section of 4-1/2" tubing was fished and recovered without incident.

With the tubing recovered an estimated 7400ft of ESP cable remained in hole above the original tubing cut depth of 4859ft. Four further Crankshaft Rope Spear runs recovered 6562ft of cable with all but 62ft recovered on the first two runs. A



washover shoe was washed/reamed in hole to 4625ft. On recovery the washover shoe was found to be solidly packed with ESP cable debris and junk. Due to the risks inherent in conducting milling operation to make further progress into the well the decision was taken to cease fishing operations and proceed to abandon the well at this depth.

A 9-5/8" bridge plug was RIH and set at 4573ft. The 9-5/8" casing was perforated at 4533ft and at 4033ft after which a 9-5/8" squeeze packer was RIH on DP and set just above the lower perforation and attempts were made to establish circulation between the perforations without success. Attempts to break down the formation and establish an injection rate were also unsuccessful with pressures of up to 18.5ppge applied. Unable to circulate or squeeze the annulus a cement plug was set inside the 9-5/8" casing from 3270ft to 4490ft. The plug was tagged at 3274ft and tested to 3,000psi with 9.2ppg brine.

Two further perforations were made. The 9-5/8" casing was perforated at 2368ft and the 10-3/4" was perforated at 1558ft. A squeeze packer was run and set above the lower perforation. The annulus between the perforations was flushed and circulated to clean 9.2ppg brine before being displaced to cement. A further cement plug was set on top of the squeeze packer from 2288ft to 1200ft. After WOC the plug was tagged at 1205ft and tested to 1200psi.

Two further perforations were made in the 10-3/4" casing at 1100ft and at 400ft. A squeeze packer was RIH and all remaining OBM behind the casing circulated out. Both annulus and casing were flushed with clean-up pills prior to displacement to seawater.

The BOP was unlatched and the rig skidded across to the Shelley P2s wellhead. This marked the end of Phase 1 of the Shelley P1z well abandonment i.e. the subsurface abandonment of the well. Phase 2, the Xmas tree recovery and Phase 3, cut and recover the wellhead were subcontracted to NCA.

The Horizontal XMAS tree was recovered by NCA between 29/12/10 and 30/12/10 using the Skandi Skolten Subsea Construction Vessel. The wellhead recovery operation was conducted between 14/04/11 and 15/04/11 using the Skandi Aker Subsea Construction Vessel. During the wellhead cut and recovery operation a discharge of OBM residue was observed. A PON1 was submitted to cover this unplanned discharge to sea. Procedures to prevent a similar discharge from occurring during the P2 well head recovery operations were put in place and the P2 wellhead was subsequently recovered without incident.

#### 22/2b-P2S

The rig was skidded across from the P1 to the P2 wellhead location on 26/11/10. The BOP was landed and latched onto the tree. The THISL was unseated and recovered to surface after which the SSTT/THRT was run in hole on a 7-5/8" landing string. The surface tree was made up and the landing string landed off and tested. The Expro SSTT hoses and manifold were rigged up and tested.

The subsequent rig up of Schlumberger Slickline equipment was suspended due to weather. While WOW, the marine riser upper slip joint packer seal failed. The lower slip joint packer failed shortly after, resulting in an unplanned discharge of brine to the sea. A PON 1 was submitted.



When weather permitted, the Expro landing string was pulled and laid out before the BOP was unlatched and the slip joint laid out. On close inspection it was discovered that the inner barrel of the slip joint was badly worn. Transocean mobilised a replacement from Aberdeen but by the time it arrived and was installed, the BOP re-latched and the Expro landing string run, landed and tested almost 150 hours of NPT had been accrued.

The Crown Plugs were pulled in only 4 Slickline runs which was a better performance than on P1z before operation began to kill the well. The well was opened up to the well test choke, an annulus pressure of 500 psi was observed and 380 psi on the tubing. This was as expected. The Nitrogen gas cap was bled off from the annulus and 9.2ppg brine was pumped down the tubing in an attempt to pressure up the tubing against a flow control valve. The plan was to shear out a Baker CMP sliding sleeve set in lower part of the upper completion. At 4200psi the pressure dropped off. 200bbls of 9.2ppg brine was pumped down the tubing and it became obvious that the flow control valve had failed to hold pressure and the CMP had not sheared. Various attempts were made to establish circulation between the tubing and annulus but in the end the tubing was perforated at 6376ft. The tubing and annulus were circulated to clean 9.2 brine. A clean–up pill was pumped to clean any oily residue from the tubing and preparations began to pull the tubing.

On the previous P1z well the tubing had been cut just above the Upper ESP. This placed significant stress on the ESP cables and cable clamps. On the P2s well the plan was revised to pull the entire upper completion including the ESP's. This was believed to give a better chance of retrieving the entire completions.

The landing string was pulled and laid out and 4-1/2" tubing pulled and laid out to a tubing depth of 7194ft. At this depth no further progress could be made. Circulation brought up large quantities of Cable Clamp debris with pieces of clamp up to 1.5" observed at the shakers. Further attempts to make progress were unsuccessful so the decision was made to sever the tubing just above the upper ESP. The tubing was cut at 4625 ft. Tubing was pulled and laid out from 4625ft without problems. This left approximately 9224ft of ESP cable and 115 Cable Clamps in hole. Fishing operations commenced at this point.

Fishing operations were not as successful as had previously been observed on the P1z well. Crankshaft rope spear runs recovered less than 100ft/run and generally less than 50ft. Milling was required to make progress but this was slow, difficult and potentially dangerous. Due to the 8.8" ID restriction in the Xmas tree the maximum bit or mill size which could be run was 8.5". This was significantly smaller than the 10-3/4" casing ID of 9.66" and the possibility always existed for large debris to get behind the bit/mill and wedge the milling assembly in hole. At a depth of 1909ft, after 17 fishing and milling runs the decision was taken to end fishing operations and abandon the well from the current depth.

A Baker inflatable packer was RIH and set at 1850ft. After pressure testing the casing to 3,000 psi, the casing was perforated at 1390ft MD and an injection rate established down to the 13-3/8" shoe at 2412ft MD. Cement was squeezed into the annulus from 1390ft to the 13-3/8" shoe depth and placed into the 10-3/4" casing from 1850ft to 1000ft. After WOC the plug was tagged at 986ft and pressure tested to 1200psi.

The 10-3/4" casing was perforated again at 970ft and the annulus cement pressure tested, no successful test was achieved. The 10-3/4" was perforated again at



720ft. A Baker Blue whale pump through packer was RIH and set below the upper perforation. Cement was pumped down the casing and into the annulus to set a cement plug from 760ft to 970ft. After WOC the annulus cement was successfully pressure tested to 1070psi, 500psi above the previously established 13-3/8" leak off with a column of 9.2ppg brine.

The 10-3/4" was re-perforated at 624ft and 420ft and all remaining OBM flushed out from the annulus. The annulus casing and annulus were flushed with a Tetraclean pill after which the BOP was unlatched and pulled.

After a period of WOW the rig move crew arrived onboard the rig. The anchors were pulled and the rig was under tight tow at the Shelley 500m mark on the 22nd Dec 2010.

This marked the end of Phase 1 of the Shelley P1z well abandonment i.e. the subsurface abandonment of the well. Phase 2, the Xmas tree recovery and Phase 3, cut and recover the wellhead were subcontracted to NCA.

The Horizontal XMAS tree was recovered by NCA between 29/12/10 and 30/12/10 using the Skandi Skolten Subsea Construction Vessel. The wellhead recovery operation was conducted between 14/04/11 and15/04/11 using the Skandi Aker Subsea Construction Vessel. During the wellhead cut and recovery operation of the P1z wellhead a discharge of OBM residue was observed. A PON1 was submitted to cover this unplanned discharge to sea. Procedures to prevent a similar discharge from occurring during the P2 well head recovery operations were put in place and the P2 wellhead was subsequently recovered without incident.

#### 2.4 Schedule of Work

The original and as-built decommissioning schedules are presented in Figure 2-1 and Figure 2-2.

			20	10								20	11					
Task	J	Α	S	0	N	D	J	F	М	Α	М	J	J	Α	S	0	Ν	D
Window for COP	<b>V</b>			7														
Phase 1: Preperations																		
Phase 2: Subsea Decommissioning (Flushing & Riser Recovery)																		
Phase 3: FPSO Removal (FPSO Disconnection & Tow)																		
Phase 3: FPSO Removal (Moooring recovery)																		
Phase 4: Subsea Decommissioning (Infrastructure recovery)																		
Phase 5: Well Abandonment																		
Close out report to DECC																		

Figure 2-1 Original Decommissioning Schedule

#### Figure 2-2 As-built Decommissioning Schedule

	1		20	010								20	11					
Task	J	Α	S	0	Ν	D	J	F	M	Α	М	J	J	Α	S	0	Ν	D
COP																		
Phase 1: Preperations																		
Phase 2: Subsea Decommissioning (Flushing & Riser Recovery)																		
Phase 3: FPSO Removal (FPSO Disconnection & Tow)																		
Phase 3: FPSO Removal (Moooring recovery)																		
Phase 4: Subsea Decommissioning (Infrastructure recovery)																		
Phase 5: Well Abandonment																		
Close out report to DECC																		



As can be seen above, the actual COP date was the 14<sup>th</sup> of July 2010; early on in the proposed COP window. Phases 1 to 3 were then carried out pretty much as planned, with the exception of the mooring recovery works which were spread over a longer period to take advantage of vessel availabilities. Likewise, phase 5 took longer, with the actual well abandonments completed in 52 days but the trees and wellheads recovered later by a different vessel. Phase 4 of the work took place slightly later than planned and was also spread out over a longer period to take advantage of vessel availabilities.

#### 2.5 Conclusions

In general, the Shelley decommissioning activities were carried out as laid out in Chapters 7, 8 and 10 of the Shelley Field Decommissioning Programmes (SH-OP-PL-0003 Rev B5). However, there are some minor deviations, as follows:

- 1. It was not possible to utilise water jetting methods to bury the pipeline ends without removal of large sections of the rockdump berm, as this methodology requires access to the seabed areas directly below the pipeline. An alternate mitigation methodology was required to remove the potential snagging hazard to the fishing industry. A number of options to mitigate this risk were considered and the utilisation of grout bag protection was considered the most suitable methodology by all parties. The grout bags were readily available because they were previously used for supporting Shelley subsea infrastructure. Premier will open a dialogue with EMT to discuss the need for a non-conformance report.
- 2. The three flexible production jumpers were recovered in sections and disposed of responsibly, rather than being refurbished for re-use. However, Premier have retained the end fittings so these could be re-used to make new jumpers.
- 3. The aim in abandoning the Shelley P1Z and P2 completions was to cut and recover the tubing to just above the completion packer at +/- 4600ft, set a deep set cement plug and a second shallow set isolation cement barrier, before cutting the well head +/- 10ft below the sea bed. Recovery of the completion was complicated due to complete disintegration of the "Polyoil" ESP cable clamps. This was due to an incompatibility of the "Polyoil" resin based cable clamp and the completion brine, which resulted in a significant The tubing was successfully cut above the packer and fishina iob. recovered on both wells to +/- 4600ft, but the ESP cable slumped into the hole due to the failure of the ESP cable clamps. The cable was fished to 4625ft and 1908ft respectively on the P1 & P2 wells. The required abandonment plugs were set in line with the Oil and Gas UK abandonment guidelines but the setting depth for the deeper plug on P2 was not ideal due to the depth the slumped ESP cable could be fished to. The abandonment configuration on both wells was "Well Examined" and complies with the Oil and Gas UK requirements for reservoir isolation for both wells.
- 4. During the wellhead cut and recovery operation of the P1z wellhead, a discharge of oil-based mud residue was observed. A PON1 was submitted to cover this unplanned discharge to sea. Procedures to prevent a similar discharge from occurring during the P2 well head recovery operations were put in place and the P2 wellhead was subsequently recovered without incident.



5. During the removal of the seabed infrastructure, small localised seabed craters around the former wellhead locations were found, probably as a result of the soil collapsing into the hole as the wellheads were removed. It was considered that the remaining concrete/grout plug in the centre of the crater presented a potential snagging hazard to the fisheries fleet. Again, readily available grout bags were used to 'infill' these craters. However, a small additional quantity of rock/gravel mix had to be mobilised to completely infill the craters, leaving a completely level seabed free of fishing snagging hazards. Premier will open a dialogue with EMT to discuss the need for a non-conformance report.



#### 3.0 POST DECOMMISSIONING ACTIVITIES

#### 3.1 Seabed Clearance Survey

Following the successful recovery of the Shelley subsea infrastructure, the ROVSV Fugro Symphony conducted a side-scan sonar as-left survey of the following locations:

- A 500m radius circle centred on the location of the former Shelley "Sevan Voyageur" FPSO.
- A 50m radius circle centred on the former location of each of the 12 suction anchors of the FPSO.
- A 500m radius circle centred on the location of the Shelley Manifold.
- A 200m wide corridor approximately 2.1km long centred on the production pipeline route.
- A 200m wide corridor approximately 2.1km long centred on the control umbilical route.

Upon completion of the as-left surveys, 11 targets were identified for further visual investigation. These targets turned out to be boulders of various sizes, fishing gear or side-scan sonar anomalies (i.e. no visual target), so no further debris associated with the Shelley development had to be recovered.

The detailed geophysical report is included in Appendix 1.

#### 3.2 Verification

Following the side-scan sonar as-left survey, the MV "Amythyst" BF19 fishing vessel mobilised on behalf of the SFF to carry out a clearance/verification trawl sweep of the same areas listed in Section 3.1.

The first part of the sweep utilised a chain mat in order to identify any major obstructions. This was then followed by a sweep utilising a standard North Sea trawl net of mesh size not less than current legislation.

As identified by the side-scan sonar, the sweep found areas with relatively large boulders. Various bits of debris were recovered and disposed of onshore, including a wheelie bin, safety boots, plastic bottles, etc.

Both the skipper and the SFF were satisfied that there are no related oilfield obstructions remaining that will affect current and future fishing activity in the defined area, see Appendix 2.

#### 3.3 Final Condition of the Offshore Site

At the former FPSO location, evidence of the anchor chains can be observed in the form of slight seabed scouring. It is expected that, over time, these markings will disappear due to natural seabed sediment transport. The area is clear of any debris.

Similarly, imprints can be seen at the former manifold location due to the drill rig anchor chains and former seabed infrastructure. These markings will eventually fade away due to natural seabed sediment transport. The area is clear of any debris, apart from the area around the former P1Z and P2S well locations where cement plugs remain, with a nominal amount of grout bags and gravel around



these cement plugs and the surrounding seabed to eliminate possible snagging hazards. For the avoidance of doubt, the cement plugs are level with the surrounding seabed.

Along the former umbilical route, an empty trench remains, which should, over time, naturally fill in with seabed sediment.

The rock-dumped section of the pipeline remains in place, with the exposed pipeline ends protected with grout bags to eliminate possible snagging hazards. It is expected that, over time, the rock dumped section would be partly covered due to natural seabed sediment transport. Likewise, the empty trench transitions at either end should naturally fill in with seabed sediment.

Lastly, slight seabed disturbances can be seen at the former FPSO anchor pile locations due to the anchor pile removal process. It is expected that, over time, seabed currents will level out these disturbances with the surrounding seabed.

#### 3.4 Legacy Management

Following completion of the Shelley decommissioning workscope, the HSE and UKHO were notified of the changes. SI 2011 No. 2492 came into force on the 14<sup>th</sup> November 2011 and includes the revocation of the Shelley safety zones. Following the publication of SI 2011 No. 2492, UKHO confirmed they would remove all charted detail relating to the Shelley field. Last but not least, the Kingfisher service have been notified that the seabed is safe.

Based on the results of the 2011 seabed clearance survey, see Section 3.1, Premier propose to survey the trenched and rock-dumped pipeline as well as the former P1Z and P2S well locations during the summer of 2012, with a view to identify any changes from the 2011 seabed clearance survey results.

In addition, Premier will undertake a post-decommissioning environmental survey at the earliest opportunity and no later than Q2 2013. Premier's intention is to combine survey activities to take advantage of vessel availabilities.

The results of these surveys will be discussed with DECC and will form the basis for agreeing a longer-term monitoring programme. Sufficient funds have been set aside for the post-decommissioning survey activities.

For the avoidance of doubt, the trenched and buried pipeline will remain the licensees' responsibility.



## 4.0 **PROJECT MANAGEMENT**

#### 4.1 HSEQ Goals and Targets

Premier's Health, Safety and Environmental Objectives are to carry out all operations in an efficient manner without:

- Causing any injury or ill health to any personnel involved;
- Creating any damage to the environment.

During the Shelley Decommissioning project, a total of four incidents were recorded, all associated with the well abandonments, as summarised in Table 4-1.

Vessel	Date	Incident ID	Summary	Classification
Sedco 704	18/11/2010	200289	ENV/PON1 - CaCl brine lost to sea - slip joint packer seal failed.	Environmental > Spill / Discharge to Environment - Slight Effect (<1).
Sedco 704	28/11/2010	200293	ENV/PON1 - Discharge of 2 bbl CaCl2 brine to the sea.	Environmental > Chemical Spillage - Minor Effect (1-15).
Sedco 704	16/12/2010	200300	LTI - IP slips on stairs and injures leg.	Injury > Lost Time Injury (LTI) - Major Injury.
Skandi Aker	14/04/2011	200332	ENV - Minor release of OBM during wellhead removal operations.	Environmental > Chemical Spillage - Slight Effect (<1).

Table 4-1 HSE Incidents

The Premier scope of work relating to the Shelley Decommissioning project was completed in 115788 man hours. Based on the incidents listed above, this results in an injury frequency of 8.6 per 1,000,000 hours.

#### 4.2 Disposal of Waste

In general, Premier's intention has been to identify re-user opportunities for all the recovered equipment/materials where possible, prior to disposal. Any disposal of waste relating to the Shelley Decommissioning was recorded by Premier's HSE department and the waste submissions to DECC are presented in Table 4-2 and Table 4-3. More detailed waste transfer notes, relating to the subsea infrastructure decommissioning only, are included in Appendix C.



## Table 4-22010 Waste Report

and the second s	Status : Subr Mode : Read	nitted ( <b>17/01/201</b> 1 1-only	11:32:00 by gp	oaul)				
Category	Reuse	Recycling	Waste to Energy	Incinerate	Landfill	Other	Totals	Comments
Group I - Special	(tonnes)	(tonnes)	(tonnes)	(tonnes)	(tonnes)	(tonnes)	(tonnes)	
Chemicals / Paints	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Drums / Containers	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Oils	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Miscellaneous Special Waste	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Sludges / Liquids / Tank Washings	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Totals	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Group II - General								
Chemicals / Paints	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Drums / Containers	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Scrap Metal	0.000	18.710	0.000	0.000	0.000	0.000	18.710	
Segregated Recyclables	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
General Waste	0.000	0.000	0.000	0.000	18.710	0.000	18.710	
Sludges / Liquids / Tank Washings	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Construction Materials	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Marine Growth (e.g. Algae)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Totals	0.000	18.710	0.000	0.000	18.710	0.000	37.420	
Group III - Other								
Asbestos	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Radioactive Materials (exc. NORM)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Clinical	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Explosives	0.000	0.000	0.000	0.000	0.000	0.000	0.000	



## Table 4-32011 Waste Report

EEMS Guidance Notes	S	itatus : In-Prepara	ation (updated 0	3/10/2011 13:56:0	0 by gdixon)			
Port Aberdeen/Peterhea	d 💙 I	Mode: Edit						
Export Port								
Category	Reuse	Recycling	Waste to	Incinerate	Landfill	Other	Totals	Comments
	(tonnes)	(tonnes)	Energy (tonnes)	(tonnes)	(tonnes)	(tonnes)	(tonnes)	
Group I - Special								
Chemicals / Paints	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Drums / Containers	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Oils	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Miscellaneous Special Waste	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Sludges / Liquids / Tank Washings	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Totals	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Group II - General								
Chemicals / Paints	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Drums / Containers	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Scrap Metal	0.000	227.950	0.000	0.000	0.000	0.000	227.950	
Segregated Recyclables	0.000	1.000	0.000	0.000	0.000	0.000	1.000	Plastic
General Waste	0.000	0.000	0.000	0.000	67.850	0.000	67.850	
Sludges / Liquids / Tank Washings	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Construction Materials	550.000	35.000	0.000	0.000	0.000	0.000	585.000	
Marine Growth (e.g. Algae)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Totals	550.000	263.950	0.000	0.000	67.850	0.000	881.800	
Group III - Other								
Asbestos	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Radioactive Materials (exc. NORM)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Clinical	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Explosives	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Totals	0.000	0.000	0.000	0.000	0.000	0.000	0.000	



## 5.0 COSTS

The Shelley Decommissioning cost estimate prepared in April 2010 is presented in Table 5-1.

Item	Premier Estimated Cost (£m)	Sevan Estimated Cost (£m)
2010 programme to remove subsea facilities	7.3	0
2010 programme to remove the Sevan Voyageur FPSO	0	9.7
2011 programme to remove subsea facilities	5.6	0
2011 programme to plug and abandon wells	11.9	0
OPEX and other charges post-COP	0.5	0
Post Decommissioning Surveys	0.5	0
Total	25.8	9.7

## Table 5-1 Shelley Decommissioning Cost Estimate

The actual costs associated with the Shelley Decommissioning project are presented in Table 5-2. These figures include a £1m allowance for future costs relating to legacy management.

## Table 5-2Shelley Decommissioning Actual Cost

Item	Premier Actual Cost (£m)	Sevan Actual Cost (£m)
2010 programme to remove subsea facilities	3.3	0.0
2010 programme to remove the Sevan Voyageur FPSO	0.0	8.1
2011 programme to remove subsea facilities	4.6	0.0
2011 programme to plug and abandon wells	15.3	0.0
OPEX and other charges post-COP	0.5	0.0
Post Decommissioning Surveys	0.5	0.0
Total	24.2	8.1

As can be seen above, from a Premier perspective, a saving of £5m was made on the removal of the subsea infrastructure. However, there was an overrun of £3.4m relating to the well abandonments, resulting in an overall saving of £1.6m. A similar saving was made by Sevan relating to the removal of the FPSO.



APPENDIX A:

SEABED CLEARANCE SURVEY REPORT



## E. GEOPHYSICAL PRELIMINARY REPORT

## DEBRIS CLEARANCE SURVEY UKCS BLOCK 22/2B SHELLEY FIELD Survey Period: 16 -18 August 2011 Fugro Subsea Services Ltd Project No.: 11-522 PRELIMINARY FIELD REPORT

Location:	Shelley		Block No.:		UKCS 22/2b	
Location:	Shelley		DIOCK NO.:		UKCS 22/20	
Location	Latitude	Long	itude	East	ing [mE]	Northing [mN]
Former Shelley FPSO Location	57° 54' 10.039" N	01° 2	4′ 20.243″ E	405	503.00	6 419 147.00
	57° 54' 54.381″ N	01° 2	4' 21.148″ E	405	550.22	6 420 517.78
	57° 54' 54.424″ N	01° 2	4' 24.171″ E	405	599.99	6 420 517.93
	57° 54' 52.999" N	01° 2	4' 41.348″ E	405	881.63	6 420 467.20
Former Shelley FPSO	57° 54' 52.564" N	01° 2	4' 44.150″ E	405	927.42	6 420 452.68
Mooring Chain Anchor	57° 53' 41.157″ N	01° 2	5' 23.464″ E	406	522.89	6 418 229.53
Locations, Numbers 1	57° 53' 39.994" N	01° 2	5' 21.585″ E	406	491.12	6 418 194.28
-12 (listed in	57° 53' 36.223" N	01° 2	5' 14.253″ E	406	367.67	6 418 080.49
ascending numerical	57° 53' 35.249" N	01° 2	5' 11.951″ E	406	329.06	6 418 051.26
order)	57° 53' 55.478″ N	01° 2	3' 02.156″ E	404	206.79	6 418 727.27
	57° 53' 56.804" N	01° 2	3' 00.711″ E	404	183.97	6 418 768.83
	57° 54' 05.898" N	01° 2	2' 57.248″ E	404	133.70	6 419 051.41
	57° 54' 07.381″ N	01° 2	2' 57.019″ E	404	131.02	6 419 097.34
Shelley Manifold Structure Location	57° 53' 01.686″ N	01° 2	3' 43.300″ E	404	844.69	6 417 047.83
Former Shelley P1 Production Well	57° 53' 00.767″ N	01° 2	3' 42.742″ E	404	834.83	6 417 019.62
Former Shelley P2 Production Well	57° 53' 01.109″ N	01° 2	3' 42.085″ E	404	824.26	6 417 030.46

Survey Equipment:	
Navigation	Fugro Starfix G_2 (Primary) and HP (Secondary), USBL HiPAP 500
ROV	FCV-3000C series WROV (FCV-3061)
Side Scan Sonar (SSS)	ROV-mounted Edgetech 4200-FS towfish operating at dual frequency (410 kHz High / 120 kHz Low) at 75 m range.
SSS Recording	Coda DA Series top-end unit running EdgeTech Discover 4200-MP V6.10 (not used) and Coda GeoSurvey DA2000 V5.2.0N (3675) recording software.
SSS Interpretation	Triton acquisition PC with Intel Core 2 Duo CPU, running Coda GeoSurvey RE2000 V5.2.0N (3675) interpretation software on Windows XP Pro operating system.



## E. GEOPHYSICAL PRELIMINARY REPORT (continued)

#### Survey Overview:

The geophysical component of the decommissioning project comprised an ROV-mounted Side Scan Sonar As-Left Survey of the entire Shelley development worksite, covering the following areas:

- Former Shelley FPSO 500m zone (15 main lines and 3 perpendicular cross lines, max. length 1050m)
- Shelley Manifold 500m zone (15 main lines and 3 perpendicular cross lines, max. length 1050m)
- Former Shelley FPSO anchor locations (12 anchors in total: three groups of four anchors, each encompassed by two SSS runlines of length 490m)
- 8" Production Pipeline & EHC Umbilical routes (200m corridors centred on the routes, both covered using three SSS runlines of length 1204m)

All main lines were oriented at 019°/199° in alignment with the Pipeline route (18.64°). The six cross lines were placed orthogonally, at an orientation of 109°/289°.

A pre-survey line plan is presented as Figure 1 (below).

The Side Scan Sonar data acquired were generally of very good quality throughout the survey, although the image appearance was largely determined by ROV flying speed, with 1800-2400m/hr considered optimal. Quality of data degraded noticeably during short periods of ROV instability caused by the vessel tugging on the ROV tether cable. The ROV tether cable was sometimes visible within the water column on the Side Scan Sonar records, and the shadow from the tether appeared as noise which partially obscured the seabed. An along-track resolution of less than 6.7cm was consistently achieved, assuming a maximum ROV fly speed of ~0.67m/s (2400m/hr) and ping rate of ~10Hz. All data was considered fit for purpose by the onboard QC geophysicists.

Details of the ROV-mounted Side Scan Sonar Surveying parameters are recorded in the document 'Shelley Coda Acquisition Log.xls'.

#### Seabed Conditions:

Water depths at the Shelley Manifold Structure and former FPSO locations are approximately 92.7 m LAT and 96.7 m LAT respectively.

The seabed sediments are expected to comprise clayey Sand with numerous shells and shell fragments. This description was derived from BGS information and from ROV video footage of the seabed. Numerous large anchor drag scars lie within the two 500m Zone sites, arranged radially around the former FPSO and Manifold locations.



## E. GEOPHYSICAL PRELIMINARY REPORT (continued)

#### Seabed Debris:

Details of all Targets / possible debris items identified from the Side Scan Sonar data are listed in Appendix 1. Of the flagged targets, 11 considered most significant were selected for further investigation by ROV visual inspection, in order to initially confirm the presence and ascertain the nature of the target. The following Table presents the findings:

#### **Shelley Target Visual Investigation**

#### \*Where target was identified, co-ordinates are as-found

Target	Easting	Northing	Length	Width	Height	Identification from Visual Investigation
Number	(mE)*	(mN)*	(m)	(m)	(m)	
SSS001	405383.00	6418661.00	0.75	1.50	1.10	Large Boulder
SSS002	405382.90	6419454.60	0.20	0.20	0.20	Small Boulder
SSS003	405183.00	6419114.00	2.00	0.75	0.75	Boulder
SSS004	405425.70	6419483.20	4.50	4.00	-	Debris Wire
SSS005	405277.23	6418216.41	-	-	-	No Target Found
SSS006	405080.77	6417959.64	2.00	1.20	0.50	Debris Rope
SSS007	404807.38	6417021.83	-	-	-	No Target Found
SSS008	404804.75	6417037.33	-	-	-	Soft Debris
SSS009	404935.06	6417249.57	-	-	-	No Target Found
SSS010	405154.14	6416909.97	-	-	-	No Target Found - SSS anomaly attributed to high point on anchor scar berm covered by numerous shells
SSS011	404824.15	6416757.43	-	-	-	No Target Found

No debris items relating to oil extraction were identified. It was not deemed necessary to remove any of the positively identified objects from the seabed.

Two items of debris, confirmed by a previous as-left survey (M/V Orelia, July 2011), are reported to lie within the Pipeline / Umbilical route corridor:

Fishing Trawl Line Debris, co-ordinates 405331.50mE, 6418177.10mN Fishing Gear Debris, co-ordinates 405311.99mE, 6418520.02mN

The former item was detected on the Side Scan Sonar records for the current project, but only a patch of disturbed seabed was evident at the latter location.

#### **References:**

British Geological Survey, 1:250,000 Series, Forties 57°N - 00° (Including part of Cod 57°N - 02°E), Seabed Sediments and Quaternary Geology Charts



#### E. GEOPHYSICAL PRELIMINARY REPORT (continued)



Figure 1: Side Scan Sonar Survey Programme



## E. GEOPHYSICAL PRELIMINARY REPORT (continued)



Figure 1: Side Scan Sonar Mosaic detail: Shelley P1 and P2 Production Well locations subsequent to placement of additional grout bags to infill gaps between the Well cement plug and surrounding seabed, which posed a possible snagging hazard. Also shown are the imprints left by the Shelley Manifold Structure, Jumpers, 8" Production Pipeline, EHC Umbilical and mattresses.

For the following data examples, the displayed across track range is 75m. Dimensions are given in L x W x H format:



#### E. GEOPHYSICAL PRELIMINARY REPORT (continued)



Figure 2: Side Scan Sonar data example, line 'FPSO\_500m\_Run\_04' (17m spacing between fix lines, ROV height 10.5m, speed 0.60m/s, heading 197°). Targets SSS002 (Boulder, 2.0 x 0.7 x 0.7m, surrounded by an accumulation of shells) and SSS004 (Debris Wire, covering an area 4.5m long x 4.0m wide).



#### E. GEOPHYSICAL PRELIMINARY REPORT (continued)



Figure 3: SSS data example, line 'FPSO\_500m\_Run\_08' (18m fix line spacing, ROV height 10.4m, speed 0.62m/s, hdg 197°). Target SSS001 (Large Boulder, 0.75 x 1.5 x 1.1m), adjacent to Umbilical trench.



## E. GEOPHYSICAL PRELIMINARY REPORT (continued)



Figure 4: Side Scan Sonar data example, line 'Mooring\_Chain\_5-8\_Run\_1' (16m spacing between fix lines, ROV height 10.4m, speed 0.51m/s, heading 228°). FPSO Anchor 5-8 corridor, showing a possible lost anchor with dimensions approx. 3.3 x 2.3 x 0.2m (bottom of image) and Mooring Chain Anchor Number 5 former position.



## E. GEOPHYSICAL PRELIMINARY REPORT (continued)



Figure 5: Side Scan Sonar Mosaic of Shelley Manifold Structure 500m Zone Site.



## E. GEOPHYSICAL PRELIMINARY REPORT (continued)



Figure 6: Side Scan Sonar Mosaic of Former Shelley FPSO 500m Zone Site.



## E. GEOPHYSICAL PRELIMINARY REPORT (continued)



Figure 7: Side Scan Sonar Mosaic of Pipeline and Umbilical Routes.



## E. GEOPHYSICAL PRELIMINARY REPORT (continued)

#### TARGET LISTING

Target	<b>Zone</b> (*Cor 404559.41	rected Naviga	1 <sup>1</sup> )	(m)	(m)	1	
Target	404559.41		tion)				
		6416803.49	1.8	1.8	0.1	Possible group of hard debris items of size up to 0.9x0.4x0.1m (lxwxh)	
Linear Target	404711.65	6417419.23	4.0	0.4	0.2	Possible linear debris	
- 5	404667.10	6416738.21	21.6	0.3	0.1	Possible partially buried wire / cable	
U	404834.32	6417387.32	0.6	0.3	0.2		
<u> </u>	404807.38	6417021.83	0.6	0.5	0.3		SSS007 (not found)
	404748.61	6416895.31	0.6	0.8	0.0		
	404773.30	6416866.67	5.1	0.5	0.2	Possible wire / cable	
	404746.74	6416837.23	0.5	0.3	0.1		
	404658.53	6416829.97	0.8	0.7	0.0		
<u> </u>	404750.37	6416892.44	0.7	0.5	0.2		
V	404806.42	6417036.13	0.6	0.5	0.1		
	404935.06	6417249.57	1.1	0.6	0.3		SSS009 (not found)
	404775.37	6416863.76	4.6	0.5	0.2	Possible wire / cable	
	404824.15	6416757.43	5.0	0.6	0.2	Possible linear debris	SSS011 (not found)
U	404970.02	6417194.75	0.3	0.7	0.3		
Target	405044.34	6417065.05	1.5	0.6	0.1		
0	405154.14	6416909.97	2.1	1.2	0.3	Probable clay rip-up clast lying on anchor scar	SSS010 (not found)
	404868.04	6417043.45	2.6	0.5	0.1	Possible linear debris	
Target	404804.75	6417037.33	0.7	0.7	0.4		SSS008
Disturbed Seabed	404348.79	6417075.11	32.7	0.0	0.0		
FPSO 500m Zo	one					·	
	405644.82	6419278.49	0.6	0.4	0.0		
	405593.16	6419004.18	0.4	0.5	0.3		
	405532.46	6419002.81	0.8	0.5	0.1		
	405536.82	6418999.98	0.9	0.5	0.1		
	405383.45	6418659.89	1.8	0.9	1.2		000004
	405381.26	6418663.04	2.2	1.0	1.4	1	SSS001
	405502.84	6419110.61	8.7	0.0	0.0		
Target	405496.83	6419119.99	1.2	0.6	0.1		
	405508.59	6419118.69	10.2	0.0	0.0		
	405518.40	6419127.41	1.0	1.5	0.5		
	405544.49	6419218.55	3.8	0.4	0.1		
Linear Target	405568.20	6419245.46	1.4	0.5	0.1		
	405302.32	6418898.51	3.2	0.5	0.1		
	405495.21	6419123.48	1.4	0.8	0.0		
	405426.37	6419481.13	3.9	0.9	0.2		000004
	405425.20	6419484.57	4.2	1.1	0.2	1	SSS004
	405300.83	6418902.34	2.3	0.0	0.0		İ.
	405384.97	6419451.78	4.2	1.4	0.6		00000
	405382.91	6419454.63	2.8	0.8	0.7	1	SSS002
	405185.01	6419111.64	1.9	1.0	0.2	(multiple flagging of same feature on adjacent SSS lines)	
	405183.10	6419113.89	2.7	1.6	0.3		SSS003
	405182.91	6419115.11	1.3	0.5	0.2		
	405552.88	6419236.94	5.4	0.0	0.0		
	405815.67	6419088.53	10.4	0.3	0.0	Possible wire / cable	1
Ŭ	405518.02	6419129.86	0.5	1.1	0.0		ł
	405515.48	6419128.29	2.2	1.6	0.5		



## E. GEOPHYSICAL PRELIMINARY REPORT (continued)

Pipeline & Ur	nbilical Rout	e					
Target	405080.77	6417959.64	6.2	3.0	0.4		SSS006
Area of Disturbed Seabed	405306.62	6418522.29	5.6	22.2	0.0	Location of Fishing Gear Debris confirmed by previous as-left survey, co-ords 405311.99mE, 6418520.02mN	
Linear Target	405319.91	6418166.66	14.8	0.0	0.0	Location of Fishing Trawl Line Debris confirmed by previous as-left survey, co-ords 405311.99mE, 6418520.02mN	
Target	405156.26	6417747.65	1.8	0.5	0.0		
Target	405277.23	6418216.41	0.5	0.3	0.3		SSS005 (not found)
Target	405420.96	6418634.75	0.8	0.2	0.0		
FPSO Ancho	r Corridors						
Target	406548.73	6418255.37	3.3	2.3	0.2	- Possible Anchor	
	406548.55	6418251.93	4.0	2.8	0.1		
Target	406493.11	6418192.60	2.4	1.0	0.2		
Target	406314.69	6418120.86	0.7	0.3	0.1		
Target	405827.16	6420459.65	0.6	0.6	0.3		
Target	405799.22	6420464.82	0.8	0.5	0.2		
Target	405828.24	6420461.98	0.7	0.7	0.4		
Target	405891.23	6420448.57	1.1	1.1	0.4		
Linear Target	405914.19	6420446.88	7.0	0.3	0.1		

This draft report represents a preliminary assessment of the data acquired offshore and is subject to change.



APPENDIX B: INDEPENDENT VERIFICATION CERTIFICATE



Our Ref: MJS / amg

30 September 2011

SFF Services Limited 24 Rubislaw Terrace Aberdeen, AB10 1XE Scotland UK

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## PREMIER OIL PLC : SHELLEY OIL FIELD DECOMMISSIONING PROGRAMME : POST DECOMMISSIONING CLEARANCE / VERIFICATION TRAWL SWEEPS

This is to certify that the MV "Amethyst" BF19 has carried out a post decommissioning sea bed / trawl verification sweep of the Shelley Oil Field concerning the area marked on the attached Chartlet (Appendix 1) and has found to the best of our knowledge and belief and using best endeavours and best practice available that there are no related oilfield obstructions remaining that will affect current and future fishing activity in the defined area and that in all respects the Shelley Oil Field has been successfully cleared of all Subsea Equipment / Infrastructure.

Signed for on behalf of the Owners of the MV "Amethyst" BF19

**Ralston Johnston** 

Signed on behalf of SFF Services Limited

Michael J Sutherland, Director of Operations

Appendix 1 Refers








## APPENDIX C: WASTE TRANSFER NOTES

	Dac. No. 50602	Disposal Site Address:	Tert LAWAR	PULLESSE	Disposal Signature:		Print Name:	PAN SMITH	licence No :	WML/E/210	Issued By:	SEPA	DESCRIPTION OF WASTE	WMM LINCAL CARCE	Skip Size			
VOTE / ADVI							•••••••••••••••••••••••••••••••••••••••				· · · · · · · · · · · · · · · · · · ·				Service			
WASTE TRANSFER NOTE / ADVICE NOTE			11/8/10	. No.: SNO (038419 / 2		SEPA		ature:		ivers Name:	うりつ	No.:		QUANTITY	Remove			
WASTE 1		Date:	111	Carriers Reg. No.:		Issued By: S		Drivers Signature:	•••••	Drivers Name:	7	Vehicle Reg. No.:			Site			
JOHN LAWRIE (ABERDEEN) GREENBANK ROAD EAST TULLOS ABERDEEN AB12 3BQ	FLL (01224) 8/1844 FAX (01224) 898053	Customer:	Professer Concernent	Collection Point:	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	LATH RASE	ALTEN HEM	Invoice Address:					Order No.:		Producers Signature:		Print Name:	

ICE NOTE Doc. No. 50738 Disposal Site Address: Disposal Signature: Disposal Signature:	Print Name: DAL CNUN Licence No.: (E) 210	Issued By: SEPA DESCRIPTION OF WASTE	Skip Size
WASTE TRANSFER NOTE / ADVICE NOTE       Date:     Date:       Date:     Disposal Site       Carriers Reg. No.:     SNO /038419 / 2       Issued By:     Disposal Sig	Drivers Signature: Drivers Name:	Vehicle Reg. No.: QUANTITY	Site Remove Service
JOHN LAWRIE (ABERDEEN) GREENBANK ROAD GREENBANK ROAD EAST TULLOS ABERDEEN AB12 3BQ FAX (01224) 898053 Customer: Customer: Customer: Producer D Other D Collection Point:	Invoice Address:	Order No.:	Producers Signature: Print Name:

McIntosh Plant Hi	re (Aberdeen) Ltd
DUTY OF CARE - WAS	TE TRANSFER NOTE
SECTION 1 - PRODUCER/CURRENT HOLDER OF WASTE Company / Individual name and address	Site operator business name and address
PREMIER OILFIELD SERVI	JOHN LANDRIE (ABDN) LITD
	GREENBANK PD
	EAST TULLOS
	ABERDEEN
Address of collection point	
NORTH ASCID BASE	Site name
	AS ABOUE
PETERHEAD	
ON BEHALF OF PRODUCER OF WASTE	Site Licence No.
Name Date	Issued by
Signature	Exempt Site:
SECTION 2 - DESCRIPTION OF WASTE	The Waste Management Licensing Regulations (as
Description of waste being transferred	amended) Schedule 3 Paragraph
CLUMP CONCRETE WEIGH	
Method of containment	Date of Transfer (for multiple loads state date range)
(tipper, skip, loose, bags, drums, etc)	2-6-11
QUANTITY (WEIGHT, No OF LOADS, ETC)	Time of Transfer (for multiple loads state time range)
4 NO. X 30T CLUMP WEIGHTS	
GELIGHT	
SECTION 3 - WASTE CARRIER	
Registered Carrier's Name McINTOSH PLANT HIRE (ABERDEEN) LTD	Vehicle Reg No(s) 4 MTL
Address	HHOG MPH, 4900 MPH,
BIRCHMOSS PLANT & STORAGE DEPOT, ECHT, WESTHILL, ABERDEENSHIRE, AB32 6XL	BUIO EHK
Registered Carrier No Expiry Date	
Issued By	
S.E.P.A DINGWALL GRAESSER HOUSE	
FODDERTY WAY	ON BEHALF OF RECEIVER
DINGWALL IV15 9XB	
ON BEHALF OF CARRIER	Name Date
Name STMSINSTOSH Date 2-6-11	
Signature G.MCIDEEL	Signature
•	

McIntosh Plant Hi DUTY OF CARE - WAS	
SECTION 1 - PRODUCER/CURRENT HOLDER OF WASTE Company / Individual name and address	Site operator business name and address
PREMIER OILFIELD SERV	NEWTON FARM,
	KINMILCK NR
	FINTRAY
Address of collection point	
NORTH ASCO BASE	Site name AS ABOUE
PETERHEAD	
ON BEHALF OF PRODUCER OF WASTE	Site Licence No.
Name Date	issued by SEPA
Signature	Exempt Site:
SECTION 2 - DESCRIPTION OF WASTE	The Waste Management Licensing Regulations (as
Description of waste being transferred	amended) Schedule 3 Paragraph
CONCRETE MATS	Registration No
Method of containment	Date of Transfer (for multiple loads state date range)
(tipper, skip, loose, bags, drums, etc)	2N23TO JUNE 2011
QUANTITY (WEIGHT, No OF LOADS, ETC)	Time of Transfer (for multiple loads state time range)
19 NO. X SWHEELER	0800 to 1800HRS
(ZOTONEA) / DS	1121
SECTION 3 - WASTE CARRIER Registered Carrier's Name	Vehicle Reg No(s) 5006 EYU
McINTOSH PLANT HIRE (ABERDEEN) LTD Address	5454 DWU, SUDG EYX,
BIRCHMOSS PLANT & STORAGE DEPOT,	SNOG EYZ, KEDS EFX
ECHT, WESTHILL, ABERDEENSHIRE, AB32 6XL Registered Carrier No Expiry Date	SNOG EFR.
SNO/038780 01.04 3	
Issued By S.E.P.A DINGWALL	
GRAESSER HOUSE FODDERTY WAY	
DINGWALL	ON BEHALF OF RECEIVER
IV15 9XB ON BEHALF OF CARRIER	
Name G. MCINTOSH Date 3-6-11	Name Date
Signature Co.MPIDERS	Signature

•										
VICE NOTE Dec. No. 51001	1 1	Disposal Signature:	Print Name:	KEULS WIT	Licence No.: NMLJ 225 JUSS	DESCRIPTION OF WASTE	Senal	Skip Size		
WASTE TRANSFER NOTE / ADVICE NOTE	Date	Carriers Reg. No.: SNO /038419 / 2	Issued By: SEPA	Drivers Signature:	Drivers Name:	Vehicle Reg. No.: SVS) (Sum		Site Remove Service		
JOHN LAWRIE (ABERDEEN) GREENBANK ROAD EAST TULLOS ABERDEEN AB12 3BQ TEL (01224) 871844 FAX (01224) 898053	Customer:	Collection Point:	P.F. ERIJSON	Invoice Address:		Order No.:		Producers Signature:	Print Name:	

ICE NOTE	Doc. No. 51201	Disposal Site Address:	Disposal Signature:	Print Name:	Kun	Licence No. WIN VILL STL 87	Issued By:	DESCRIPTION OF WASTE	Scarl 1100	Skip Size		
WASTE TRANSFER NOTE / ADVICE NOTE		Date: 6 M	Carriers Reg. No.: SNO /038419 / 2	Issued By: SEPA	Drivers Signature:	Drivers Name: THOMS V		Vehicle Reg. No.: Fum	QUANTITY	Site Remove Service		
JOHN LAWRIE (ABERDEEN) GREENBANK ROAD	EAST TULLOS ABERDEEN AB12 3BQ TEL (01224) 871844 FAX (01224) 898053	Customer	Dint:	()\H	Invoice Address:			Order No.:		Producers Signature:	Print Name:	
												*

	Doc. No. 50515	JOHN HADRESS: ASA	Disposal Signature:		iemen imit	Licence No. Wht N Jur al	Issued By: SEPA	R. DESCRIPTION OF WASTE	Skip Size		
WASTE TRANSFER NOTE / ADVICE NOTE		Date: 2/6/11	Carriers Reg. No.: SNO /038419 / 2	Issued By: SEPA	Drivers Signature:	Drivers Name: 5,57 Burd	Vehicle Reg. No.: (TTANO)		Site Remove Service		
JOHN LAWRIE (ABERDEEN) GREENBANK ROAD EAST TULLOS ABERDEEN AB12 3BQ	TEL (01224) 871844 FAX (01224) 898053	Customer: VREMIEL	Collection Point:	l'Eventean	Invoice Address:			Order No.:	Producers Signature:	Print Name:	

ICE NOTE Doc. No. 50550	Disposal Site Address: 2041 LAWLE (ASA) TUUUS	Disposal Signature:	Licence No. M. I. N. Z. & S. & Br. Issued By:	ROF DESCRIPTION OF WASTE	Skip Size	
WASTE TRANSFER NOTE / ADVICE NOTE	Date: / ULL Carriers Reg. No.: Carriers Reg. No.: Carriers Processing 10.10	Issued By: Issued By: SEPA Drivers Signature:	Drivers Name	Vehicle Reg. No.: EWL	Site Remove Service	
JOHN LAWRIE (ABERDEEN) GREENBANK ROAD EAST TULLOS ABERDEEN AB12 3BQ TEL (01224) 871844 FAX (01224) 898053	Customer:	ALE LISTA SAFE		Order No.:	Producers Signature:	Print Name:

JOHN LAWRIE (ABERDEEN) GREENBANK ROAD EAST TULLOS ABERDEEN AB12 3BQ

WASTE TRANSFER NOTE / ADVICE NOTE

							T			6		e a la constante de		
Doc. No. 51676	Disposal Site Address: Joth LAUALIG ABAU EAST TUUUUS	Disposal Signature:	Drid Mana.	FILM VARIES	l icence No -	WILLIZOLTU	Issued By:	SEPA	DESCRIPTION OF WASTE	SCR	Skip Size			
		SNO /038419 / 2									Service			
	Date: 19人フ) / / Carriere Beg Mo -		SEPA	4 A D S		ie:	•	. No.:		QUANTITY	Remove			
	Date: 		Issued By:	Drivers Signature:		Drivers Name:		Vehicle Reg. No.:			Site			
TEL (01224) 871844 FAX (01224) 898053	Customer: 0.00000000000000000000000000000000000	Collection Point:	Dru Uters with	Invoice Address:					Order No.:		Producers Signature:		Print Name:	***************************************

McIntosh Plant Hi DUTY OF CARE - WAS	
SECTION 1 - PRODUCER/CURRENT HOLDER OF WAST	
Company / Individual name and address	Site operator business name and address
PREMIER OILFIELD SFR	V NEWTON FARM
	KINMIKK NR FINTRAY
Address of collection point	Site name
NORTH ASCO BREE	AS . ABOVE
PETERHEAD	
ON BEHALF OF PRODUCER OF WASTE	Site Licence No.
Name Date	Issued by SEPA
Signature	Exempt Site:
SECTION 2 - DESCRIPTION OF WASTE	The Waste Management Licensing Regulations (as
Description of waste being transferred	amended) Schedule 3 Paragraph
CONCRETE MATS	Registration No.
Method of containment	Date of Transfer (for multiple loads state date range)
(tipper, skip, loose, bags, drums, etc)	19th JULY 2011
QUANTITY (WEIGHT, No OF LOADS, ETC)	Time of Transfer (for multiple loads state time range)
16NO.X 8 WHEELER	and of transier (for moliple loads state time range)
(ZOTON EA) LDS	
SECTION 3 - WASTE CARRIER Registered Carrier's Name	Vehicle Reg No(s) 1 X MIDDLER TRANS
McINTOSH PLANT HIRE (ABERDEEN) LTD Address	3 X J. JANNESON
BIRCHMOSS PLANT & STORAGE DEPOT,	
ECHT, WESTHILL, ABERDEENSHIRE, AB32 6XL Registered Carrier No Expiry Date	
SNO/038780 01.04, 13 Issued By	
S.E.P.A DINGWALL	
GRAESSER HOUSE FODDERTY WAY	ON BEHALF OF RECEIVER
DINGWALL IV15 9XB	
ON BEHALF OF CARRIER	Name Date
Name G. MEINTOSH Date 19-7-11	
Signature <u>Car MPINSosh</u>	Signature
2	

JOHN LAWRIE (ABERDEEN)	WASTE TRANSFER NOTE / ADVICE NOTE	VICE NOTE	
GREENBANK ROAD EAST TULLOS ABERDEEN AB12 3BQ TEL (01224) 871844 FAX (01224) 800063			
Customer		Dac. No. 51700	
PREMIER	Date: 12/8/11	Disposal Site Address:	
Collection Point:	Carriers Reg. No.: Carriers Reg. No.:	727	,
INVERIORDES	2/1614000/040	Disposal Signature:	
	Issued By: SEPA		
		Print Name:	
Invoice Address:	Drivers Signature:	2AIN UKQUINUL	
	Determent Marchine	Licence No.:	
	civers name:		
•••••••••••••••••••••••••••••••••••••••		Issued By:	
Order No.:	Vehicle Reg. No.:	SEPA	
	QUANTITY	7 DESCRIPTION OF WASTE	
Producers Signature:	Site Remove Service	Skip Size SCLA	
Print Name:			

EI 051773	EI 051768	EI 051761
e (Aberd	John Lawrie (Aberdeen) Ltd.	John Lawrie (Aberdeen) Ltd.
VANTON INU. ESTATE, 181: 01349 / 830924 VANTON. Fax 01349 / 830903	EVANIUN INU. EXIMIE, 191. UI343 / 000014	а <b>—</b> Х <sub>а</sub>
LE IV 16 9XJ	ROSS-SHIRE IV16 9XJ Telex: 73283	ROSS-SHIAE IV16 9XJ Talex: 73283
HARMIER CONSEC NO (16.8734 UEN REG. 1 DATE 12-08-11 TIME 15-29	PARTMIKLZ CONSEC NO 068725 VEH REG. 1 DATE 12-08-11 TIME 13-21	06871 i -11
	1ST VELIGHT 38880 K9	IST WEIGHT 2656U K9
CONSEC NO 068736 VEH REG. 1 DATE 12-08-11		CONSEC NO 068712 VEH REG. 1 DATE 12-08-11
TIME 15-51 RE ENTERED (IT 296580 kg 2ND VETGHT 15580 kg NET MEIGHT 15580 kg	TIME 13-50 RE: ENTERED MT 38800) kg 2MD WETGHT 16060 kg NET WEIGHT 22740 kg	REENTERED UT 26460 kg ZEENTERED UT 26460 kg XET WEIGHT 14760 kg NET WEIGHT 11700 kg
13-100 KG.		rax
shicle Reg. No.	Vehicle Reg. No. CMICD DLUC	B Vahicle Rog. No. Haulier
type of Material Code	Figue of Material Code	( Material
rade Advice Note No.	Grade Advice Note No.	Grade Advice Nota No.
PURCHASE CASH CREDIT	PURCHASE CASH CREDIT	PURCHASE CASH CREDIT
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EI 051776	John Lawrie (Aberdeen) Ltd. Evanton IND. ESTATE, Tel: 01349 / 830624	LE IV16 9XJ	TREMMER CONSEC NO 16687358 UEH REG. 1 UATE 12-08-11 TIME 16-43 15T WEIGHT 36640 ks	C NO 068739 E6. 1	NAILE 12-UB-11 TIME 17-18 RE ENTERED WI 3684U k3 2MD VIETGHT 15940 k9 NET VIETGHT 20900 k9	THE	f Mateiial	Grade Advice Note No.	PURCHASE CASH CREDIT	Price per tanine £	TOTAL E.	Signature Kristicker and Statisticker and Andreas Andreas Andreas Andreas Andreas Andreas Andreas Andreas Andre Andreas Andreas
	John Lawrie (Aberdeen) Ltd. EVANTON IND. ESTATE, Jel: 01349 / 830624	IE IV16 9XJ	HEMMER CONSEC NO (K&741) UEH REG. 1 UEH REG. 1 DATE 12-08-11 TIME 20-27 IST (METGHT 380360 kg	CONSEC NO (K8744 UEM RED- 1 MATE (TC-ND-1)	NHIE 13-00-11. TIME 07-38 RE ENTERED UN 36060 ky 240 WEIGHT 22200 ky NET WEIGHT 22200 ky	Bhu.	f (Material	Grade Advice Mote No.	PURCHASE CASH CREDIT	Price per tonne £	TOTAL E	Signatüre Andersteinen Statisticalen interester interester interester interester interester interester interester interest

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Ei         USI/84           John Lawrie (Aberdeen) Ltd.         Ltd.           Faxnron ind. EstArc,         Tal: 01349 / 830624           Evanron,         Fax: 01349 / 830903           Ross-shire Ivi6 9XJ         Telex: 73283	ASE ASE NO 066 EH RE6. 1 ASE 11-33 ST WEIGHT ASE AD 066 EH RE6. 1 ASE 12-08-11 The 11-33 ST WEIGHT ASE AD 066 EH RE6. 1 ASE ASE AD 066 ASE ASE AS ASE ASE AS ASE AS ASE AS ASE ASE AS ASE AS ASE AS ASE ASE AS	TOTAL £
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		Fax: 0	/16 9XJ		CONSEC NO	- 	ILVE UT-35 1ST WEIGHT	· · ·	EC NO	UEH REG. 1 DATE 13-08-	TIME US-46 Re entered				YHIC .		•		PURCHASE		FOTAL £	tar Tamina dis Pada di San
9	John Lawr EVANTON IND. ESTATE	EVANTON,	RUSS-SHIRE IVI6 9XJ	PREMIED								an a		Vehicle Reg. No.	015	Type of Material	Grade		PUR	Price per tonne £	10	Sighajure

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KEVIN WATT \*

JOHN LAWRIE (ABERDEEN)	WASTE TRANSFER NOTE / ADVICE NOTE	CE NOTE	
GREENBANK ROAD EAST TULLOS ABERDEEN AB12 3BQ TEL (01224) 871844 FAX (01224) 898053		Doc. No. 51251	
Cusiomer	Date:	-	
Producer Other	1118111	207 C 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
int:	Carriers Reg. No.: SNO /038419 / 2		
AREANER DOCK		Disposal Signature:	
	Issued By: SEPA		
		Print Name:	
	Drivers Signature:	KENJ WAN	
		Licence No.:	
	Drivers Name: SMCUAL		
		Issued By:	
	Vehicle Reg. No.:	SEPA	
Order No.:	SST RWF	DESCRIPTION OF WASTE	
	QUANTITY	WM By LICAL	
Producers Signature:	Site Remove Service	Skip Size	
Print Name:			

ICE NOTE Doc. No. 51296	Disposal Site Address: JOHLS LAWRE (A302)	Disposal Signature:	Print Name: Levix Unit	Licence No.: Issued By:	DESCRIPTION OF WASTE	Skip Size	
WASTE TRANSFER NOTE / ADVICE NOTE	Date: 1918/11		Drivers Signature:	Drivers Name: - A J LOR	Vehicle Reg. No.: SUOS CWS	Site Remove Service	
JOHN LAWRIE (ABERDEEN) GREENBANK ROAD EAST TULLOS ABERDEEN AB12 3BQ TEL (01224) 871844 FAX (01224) 898053	Customer: Producer Concert	int:	Invoice Address:		Order No.:	Producers Signature:	Print Name:

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ADVICE NOTE Doc. No. 51333	Disposal Site Address: Disposal Site Address: Disposal Site Address: Disposal Site Address: Disposal Site Address: Disposal Site Address:	Disposal Signature:	Print Name:	Licence No: UNL N/ N/ R0154 / 57 Issued Bur	DESCRIPTION OF WASTE	Skip Size UM Sitk I CAL
WASTE TRANSFER NOTE / ADVICE NOTE	Date: 19 0 8 11	Carriers Reg. No.: SNO /038419 / 2 Issued By:	SEPA Drivers Signature:	Drivers Name:	Vehicle Reg. No.: S.S.7 B.W.S. QUANTITY	Site Remove Service
JOHN LAWRIE (ABERDEEN) GREENBANK ROAD EAST TULLOS ABERDEEN AB12 3BQ TEL (01224) 898053 FAX (01224) 898053	Customer: RREMILE? Producer	Point:	Invoice Address.		Order No.:	Producers Signature: Print Name:

JOHN LAWRIE (ABERDEEN)	WASTE TRANSFER NOTE / ADVICE NOTE	ICE NOTE	
GREENBANK ROAD EAST TULLOS ABERDEEN AB12 3BQ TEL (01224) 871844		Doc No. 51350	
FAX (01224) 898053		100	
71515	Uate: 19. 08. 11	JOHN LAWRIE (ABON)	
Producer L Other L Collection Point:	Carriers Reg. No.: SNO /038419 / 2		
ARGERN DOCK		Disposal Signature:	
	Issued By: SEPA	1 less	
		Print Name:	
Invoice Address:	Drivers Signature:	T ADART	
	Drivers Name:	LICENCE NO.	
		Issued By:	
	Vehicle Reg. No.:	SEPA	
Order No.:	Svos ewit	DESCRIPTION OF WASTE	
	QUANTITY		
Producers Signature:	Site Remove Service	Skip Size	
	the second se		
Print Name:			

VNAS Date: Date: Silver	WAS IE I KAN SFEK NUTE / ADVICE NUTE Doc. No. 51362	19 65. s Reg. No.:	Issued By: BEPA Disposal Signature: Print Name: Print	Drivers Signature:	Drivers Name: exAN	Vehicle Reg. No.: SvST Bwら DESCRIPTION OF WASTE	QUANTITY	Site Remove Service Skip Size UMB\1.LICA	
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1.00 1 - ASLOR WHL N 20154 97 \* ..... \* \* \* (ABDN) DESCRIPTION OF WASTE Doc. No. 51398 UMBILICAL -1042 AAWRIF. SEPA \* Disposal Site Address: Disposal Signature: WASTE TRANSFER NOTE / ADVICE NOTE Print Name: Licence No.: \*\*\*\*\* Issued By: Skip Size SNO /038419 / 2 ------SU57 BUM \* Service QUANTITY Remove 19/08/11 Carriers Reg. No.: SEPA Drivers Signature: Vehicle Reg. No.: Drivers Name: Issued By: Site Date: ..... **JOHN LAWRIE (ABERDEEN)** Other ABIRDIEN DOCK Producer 
Other EAST TULLOS ABERDEEN AB12 3BQ **GREENBANK ROAD** TEL (01224) 871844 FAX (01224) 898053 Producers Signature: PREMIER Invoice Address: Collection Point: Print Name: Customer: Order No.:

JOHN LAWIE (ABERDEEN)     WASTE TRANSFER NOTE / ADVICE NOTE (ABENDER)       REFENBANK ROAD EAST TULLOS EAST TULLOS	0TE Doc. No. 51951	Disposal Site Address:	Disposal Signature: Print Name:	licence No -	+1+	DESCRIPTION OF WASTE	ize	
JOHN LAWRIE (ABERDEEN)         Exerembank Road East TULLOS BERDEEN AB12 3BG East TULLOS BERDEEN AB12 3BG East TULLOS BERDEEN AB12 3BG East TULLOS BERDEEN AB12 3BG FLOOLOS 01224) 838053         Customer:       Other         Producer       Other         Invoice Address:       Other         Producer Signature:       Order No.:         Producer Signature:       Producer Signature:	WASTE TRANSFER NOTE / ADVICE NOTE	ALKIN	SEPA SNO /038419 / 2			No.: B.J.P. QUANTITY	Remove	
	JOHN LAWRIE (ABERDEEN) ©REENBANK ROAD EAST TULLOS ABERDEEN AB12 3BQ TEL (01224) 871844 FAX (01224) 898053	d'an	ů Z	Invoice Address:		Order No.:	Producers Signature: Print Name:	

...... Vever word www.hallerergen.log Forther March (Mor) The Part was DESCRIPTION OF WASTE 51984 SEPA Doc. No. Disposal Site Address: Disposal Signature: Licence No.: WASTE TRANSFER NOTE / ADVICE NOTE Print Name: 1 Skip Size Issued By: SNO /038419 / 2 157 Bue 101 8111 ......... Cy ST Award Eles Service QUANTITY Remove ..... SEPA Carriers Reg. No.: Drivers Signature: Vehicle Reg. No.: Drivers Name: ..... Issued By: Site Date: Aberger Dout JOHN LAWRIE (ABERDEEN) Producer C Other ABERDEEN AB12 3BQ TEL (01224) 871844 FAX (01224) 898053 **GREENBANK ROAD** EAST TULLOS Producers Signature: Invoice Address: **Collection Point:** Print Name: Customer: Order No.:

VICE NOTE Doc. No. 52000	Disposal Site Address: John Lawluc Tuucas	Disposal Signature: Print Name:	Licence No.: Issued By: SEPA	UM Scener		
WASTE TRANSFER NOTE / ADVICE NOTE	Date: / 9 / 1 Carriers Reg. No.:	Issued By: SePA Drivers Signature:	Drivers Name: Vehicle Reg. No.:	QUANTITY Stip Demote Service		
JOHN LAWRIE (ABERDEEN) GREENBANK ROAD EAST TULLOS ABERDEEN AB12 3BQ TEL (01224) 871844 FAX (01224) 898053	Customer:	200 m		Order No.:	Producers Signature: Print Name:	

WASTE TRANSFER NOTE / ADVICE NOTE Doc. No. 51459	Date: 15 06 11 Disposal Site Address:	Carriers Reg. No.: SNO /038419 / 2 Disposal Signature:	Issued By: Print Name: Print N	10DCA)	Drivers Name:	Vehicle Rea. No.: SEPA	SUST BUP DESCRIPTION OF WASTE	QUANTITY	Site Remove Service Skip Size		
JOHN LAWRIE (ABERDEEN) GREENBANK ROAD EAST TULLOS ABERDEEN AB12 3BQ TEL (01224) 871844 FAX (01224) 898053	Customer:	<b>-</b> 13 9		Invoice Address:			Order No.:		Producers Signature:	Print Name:	

	OUCLC . ON . DOG	Disposal Site Address:	(WCSA) SISLAA WHOT		Disposal Signature:	Print Name:	IAmer .		LICENCE NO. N 20154 97	Issued By:	SEPA	DESCRIPTION OF WASTE		Skip Size RASSER		
WASTE TRANSFER NOTE / ADVICE NOTE		Date:	11 08 01	Carriers Reg. No.: SNO /038419 / 2		issued by: SEPA	Drivers Signature:		Drivers Name:	M. K. B.	Vehicle Reg. No.:	SNST BNR	QUANTITY	Site Remove Service		
JOHN LAWRIE (ABERDEEN) GREENBANK ROAD EAST TULLOS ABERDEEN AB12 3BQ TEI (M1224) 871844	FAX (01224) 898053	Customer:	Right is a	Collection Point:	REGIONATION DOSE IC			Invoice Address:				Order No.:		Producers Signature:	Print Name:	