

Ann A4 Installation Decommissioning Programme



Final Version – 17 February 2017

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TERMS AND ABBREVIATIONS

ABBREVIATION	EXPLANATION
Ann A4	Single subsea well (A4z) tied back to Ann manifold
Ann Template	The Ann manifold is located inside and protected by the template
BEIS	Department for Business, Energy & Industrial Strategy
Centrica	Centrica North Sea Limited
COP	Cessation of Production
HSE	Health and Safety Executive
"	Inch, 25.4millimetres
km	Kilometre
LOGGS	Lincolnshire Offshore Gas Gathering System
m	Metre
MAT	Master Application Template
n/a	Not Applicable
NB	Nominal bore
NFFO	National Federation of Fishermen's Organisations
NIFPO	Northern Ireland Fish Producers Organisation
NORM	Naturally Occurring Radioactive Material
NUI	Normally Unattended Installation
OGA	Oil & Gas Authority
OSPAR	Oslo Paris Convention
PON	Petroleum Operations Notice
PWA	Pipeline Works Authorisation
SAT	Subsidiary Application Template
SCI	Site of Community Importance
SE	South East
SFF	Scottish Fishermen's Federation
SSW	South South West
tba	To Be Arranged
Te	Tonne
WGS84	World Geodetic System 1984
WHPS	Wellhead Protection Structure

1. EXECUTIVE SUMMARY

1.1 Decommissioning Programme

This document contains one Decommissioning Programme, as described under Section 29 of the Petroleum Act 1998. The Decommissioning Programme is for:

- The Ann A4 installation (a wellhead protection structure).

The pipeline (PL2164) and umbilical (PL2165) associated with the Ann A4 Installation will be addressed under a separate Decommissioning Programme for the wider Ann field.

1.2 Requirement for Decommissioning Programmes

Installation: In accordance with the Petroleum Act 1998, Centrica North Sea Limited (Centrica) as operator of the Ann field, and also as the Section 29 notice holder (see Table 1.2), is applying to the Department for Business, Energy & Industrial Strategy (BEIS) to obtain approval for decommissioning the subsea installation detailed in Section 2 of this programme.

In conjunction with public, stakeholder and regulatory consultation, the Decommissioning Programme is submitted in compliance with national and international regulations and the BEIS guidance notes. The schedule outlined in this document is for a two-year decommissioning plan beginning early 2017.

1.3 Introduction

The Ann field (block 48/10a and 49/6a), wholly owned by Centrica, comprises a subsea template containing two wells (49/6a-A2 and 49/6a-A3z) and further subsea well Ann A4 (49/6a-A4z) protected by the wellhead protection structure (WHPS), tied back to the Ann manifold inside the template via a 6" nominal bore pipeline spool piece 124m long and an umbilical jumper, approximately 129m long. First gas from Ann A4 was achieved in April 2006. The final version of the report justifying COP was submitted to the OGA and formally approved December 2015.

The well formally ceased production on 1st May 2016.

Following public, stakeholder and regulatory consultation, the Decommissioning Programme will be submitted in full compliance with the BEIS guidance notes. The Decommissioning Programme explains the principle of the removal activities and is supported by a high-level environmental impact assessment.

1.4 Overview of Installation/Pipelines Being Decommissioned

1.4.1 Installation

Table 1.1: Installation Being Decommissioned			
Field :	Ann (A4)	Production Type	Gas
Water Depth (m)	28m	UKCS block	49/6a
Surface Installations			
Number	Type	Topsides Weight	Jacket Weight (Te)
None	n/a	n/a	n/a
Subsea Installation		Number of Wells	
Number	Type	Platform	Subsea
1	WHPS	0	1
Drill Cuttings Piles		Distance to median	Distance from nearest UK coastline
Number of Piles	Total Est volume (m ³)	km	km
None	n/a	57km	116km North East of Great Yarmouth

Table 1.2: Installation Section 29 Notice Holders Details		
Section 29 Notice Holder	Registration Number	Equity Interest (%)
Centrica North Sea Limited	04594558	100%
Centrica North Sea Gas Limited	SC182822	0%
Centrica Resources (UK) Limited	06791610	0%
GB Gas Holdings Limited	03186121	0%

1.4.2 Pipelines

Table 1.3: Pipelines Being Decommissioned		
Number of Pipelines / Umbilicals	n/a	n/a

Table 1.4: Pipelines Section 29 Notice Holders Details		
Section 29 Notice Holder	Registration Number	Equity Interest (%)
n/a	n/a	n/a

1.5 Summary of Proposed Decommissioning Programmes

Table 1.5: Summary of Decommissioning Programme		
Selected Option	Reason for Selection	Proposed Decommissioning Solution
1. Topsides		
n/a	n/a	n/a
2. Jacket/Floating Facility (FPSO etc.)		
n/a	n/a	n/a
3. Subsea Installation		
Wellhead Protection Structure (WHPS) will be removed.	To remove all seabed structures and leave a clear seabed. To comply with OSPAR Decision 98/3 requirements.	WHPS will be removed from the seabed.
4. Pipeline, Flowline & Umbilical		
n/a	n/a	n/a
5. Well		
The well will be abandoned to comply with HSE "Offshore Installations and Wells (Design and Construction, etc.) Regulations 1996" and in accordance with Oil & Gas UK Guidelines for the Suspension and Abandonment of Wells.	Meets the BEIS and HSE regulatory requirements.	The Ann A4z well will be abandoned using a drilling rig. A Master Application Template (MAT) and the supporting Subsidiary Application Templates (SAT) will be submitted in support of activities carried out. A PON5 and the appropriate marine licences will also be submitted to the BEIS for application to abandon the well.
6. Drill Cuttings		
No cuttings pile exists at Ann A4.	Cuttings are widely dispersed and fall below OSPAR 2006/5 thresholds.	n/a
7. Interdependencies		
The pipelines will be flushed and cleaned before being disconnected from the wellhead to allow its removal but otherwise they will be left intact until future Ann related decommissioning activities. This work is currently scheduled to take place between 2018 and 2022. Pipeline stabilisation features will be decommissioned at the same time as the pipelines. Ann A4 exports gas to the Ann manifold and on to the LOGGS Riser Platform in LOGGS platform complex. Control and hydraulics for both the Ann manifold and Ann A4 – via an umbilical jumper – are supplied via an umbilical originating from Audrey B.		

1.6 Ann Field Location including Ann A4 and Adjacent Facilities

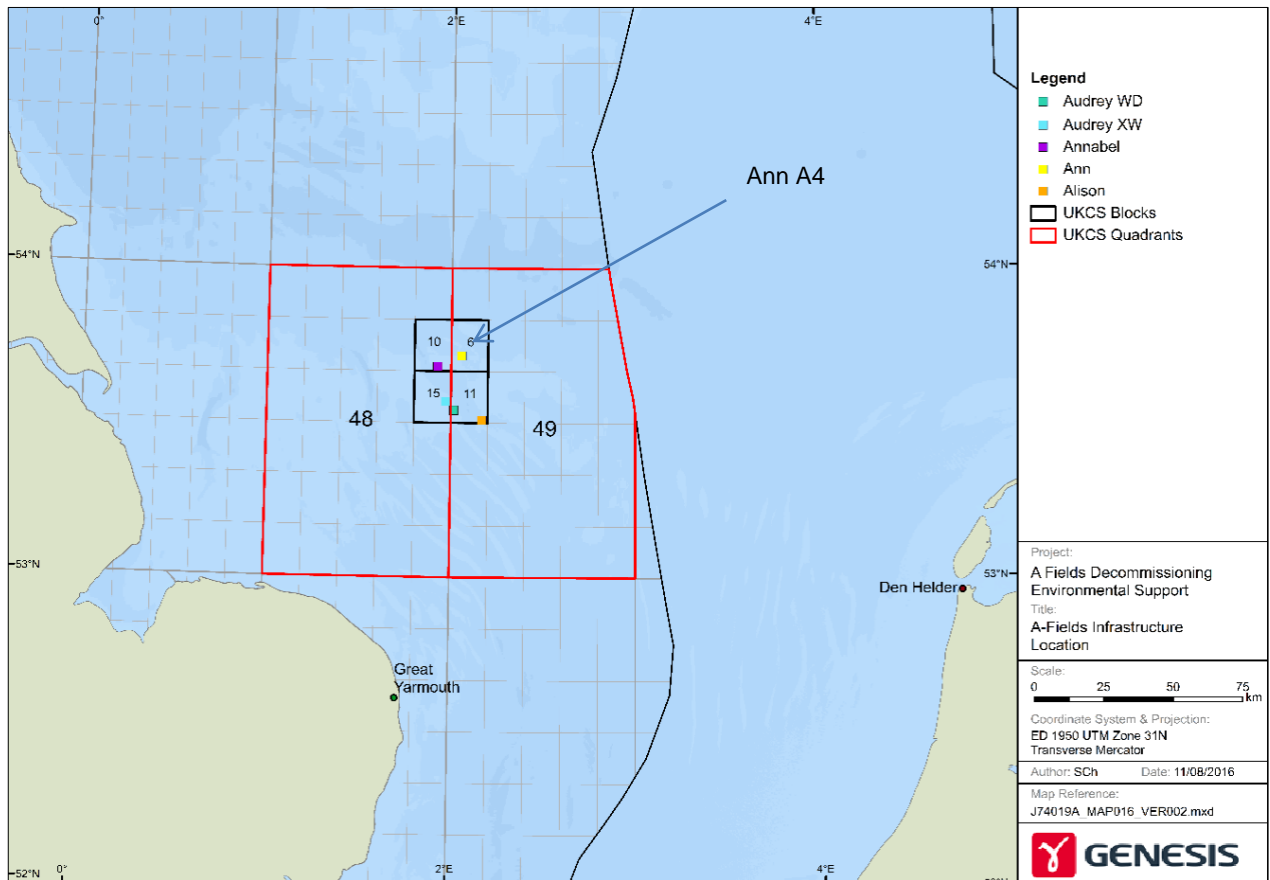


Figure 1.1: Ann (with Ann A4) Field Location in UKCS

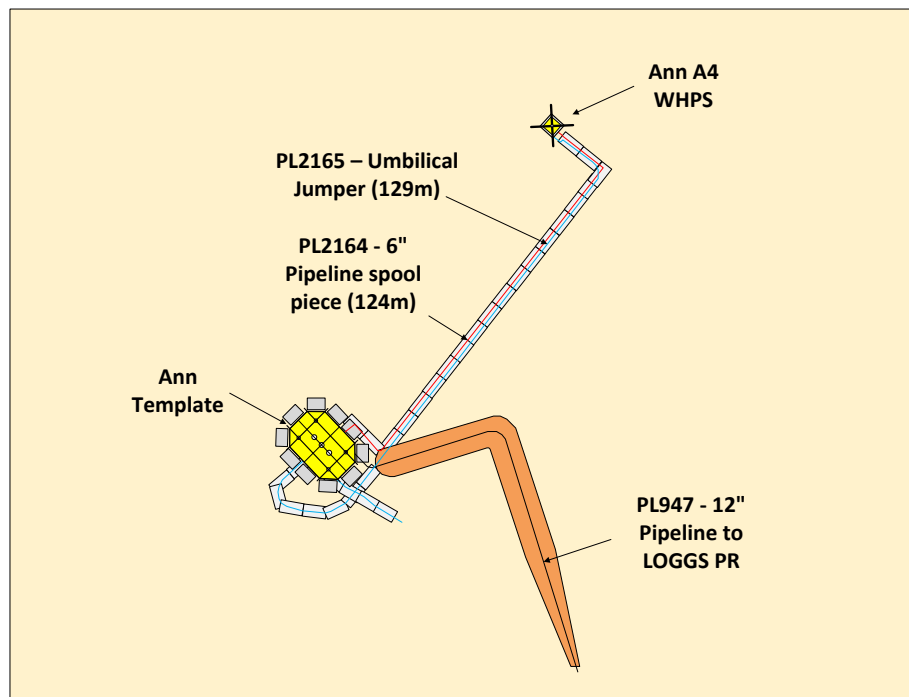


Figure 1.2: Ann A4 Layout

Table 1.6: Adjacent Facilities					
Owner	Name	Type	Distance/ Direction	Information	Status
Centrica	Ann Installation	Subsea Template	Approx. 101m SSW of Ann A4 well	Reception for Ann A4 pipeline, exports gas and condensate to LOGGS PR Platform	Non-operational
Centrica	Alison Installation	Subsea Template	Approx. 24.1km SE of Ann installation	Ties into the Ann 12in gas export pipeline PL947	Non-operational
Centrica	Alison Tee	Subsea manifold & protection structure	Approx. 24.1km SE of Ann installation	Tie-in point in PL947 for Alison 8in gas export line	Non-operational
Centrica	Audrey B	NUI	Approx. 17.3km SSW of Ann installation	Provides power, controls and chemicals to Ann manifold	Operational
ConocoPhillips	LOGGS PR	Riser Platform	Approx. 36km south of Ann installation	Reception for pipeline PL947 from Ann installation	Operational
ConocoPhillips	LOGGS	Platform Complex	Approx. 36.3km south of Ann installation	Lincolnshire Offshore Gas Gathering System	Operational
Impacts of Decommissioning Proposals					
No impact is expected.					



1.7 Industrial Implications

Well abandonment and removal will be completed using a drilling rig. Some preparatory work will be undertaken by a light well intervention vessel and/or a diving support vessel subject to commercial considerations.

It is Centrica's intention to use a combination of existing framework agreements and new contracts for the decommissioning of Ann A4 installation. Centrica are also planning to combine Ann A4 decommissioning activities with other development or decommissioning activities. A drilling rig will be sourced in 2017 for a number of well abandonment activities in the Southern North Sea and as such it is possible that the sequence of work may change. Therefore, the decommissioning schedule is extended to allow flexibility for when decommissioning operations are carried out and completed.

2. DESCRIPTION OF ITEMS TO BE DECOMMISSIONED

2.1 Installation: Surface Facilities

Table 2.1: Surface Facilities Information								
Name	Facility Type	Location ED50 Format	Topsides/Facilities		Jacket (if applicable)			
			Weight (Te)	No of modules	Weight (Te)	Number of legs	Number of piles	Weight of piles (Te)
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

2.2 Installation: Subsea including Stabilisation Features

Table 2.2: Subsea Installations and Stabilisation Features					
Subsea installations including Stabilisation Features	Number	Size/ Weight (Te)	Location		Comments/Status
Wellhead	1	10.0	WGS84 Decimal	53.715522° N 02.055729° E	Well is shut in, and will be abandoned.
			WGS84 Decimal Minute	53° 42.931" N 02° 03.344" E	
Wellhead Protection Structure	1	33.7	WGS84 Decimal	53.715522° N 02.055729° E	WHPS is attached to Wellhead and not piled. WHPS will be transported to shore for reuse, unless the condition is found to preclude refurbishment, in which case it will be recycled.
			WGS84 Decimal Minute	53° 42.931" N 02° 03.344" E	
Tree	1	16.1	WGS84 Decimal	53.715522° N 02.055729° E	Tree is located within the WHPS and will be lifted to shore for reuse, unless the condition is found to preclude refurbishment, in which case it will be recycled.
			WGS84 Decimal Minute	53° 42.931" N 02° 03.344" E	
Concrete Mattresses	n/a				
Grout Bags	n/a				
Formwork	n/a				
Froned Mats	n/a				
Rock Emplacement	n/a				

2.3 Pipelines Including Stabilisation Features

Table 2.3: Pipeline/Flowline/Umbilical Information									
Description	Pipeline Number (as per PWA)	Diameter (NB) (inches)	Length (km)	Description of Component Parts	Product Conveyed	From – To End Points	Burial Status	Pipeline Status	Current Content
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Table 2.4: Subsea Pipeline Stabilisation Features				
Stabilisation Feature	Total Number	Weight (Te)	Locations	Exposed/Buried/Condition
n/a	n/a	n/a	n/a	n/a

2.4 Wells

Table 2.5: Well Information			
Platform Wells	Designation	Status	Category of Well
n/a	n/a	n/a	n/a
Subsea Wells			
49/6a-A4z	Gas Production	Shut In	SS-4-3-3

For details of well categorisation see the Oil & Gas UK Guidelines for the Suspension or Abandonment of Wells. Issue 5, July 2015.

2.5 Drill Cuttings

(See Section 3.7 for further information)

Table 2.6: Drill Cuttings Pile Information		
Location of Pile Centre (Latitude/Longitude)	Seabed Area (m ²)	Estimated volume of cuttings (m ³)
No drill cuttings pile exists at Ann A4. See Section 2 of the Ann Pre-decommissioning Environmental Survey [2] in Section 7 for further details.	n/a	n/a

2.6 Inventory Estimates

Estimated Inventory: Installations

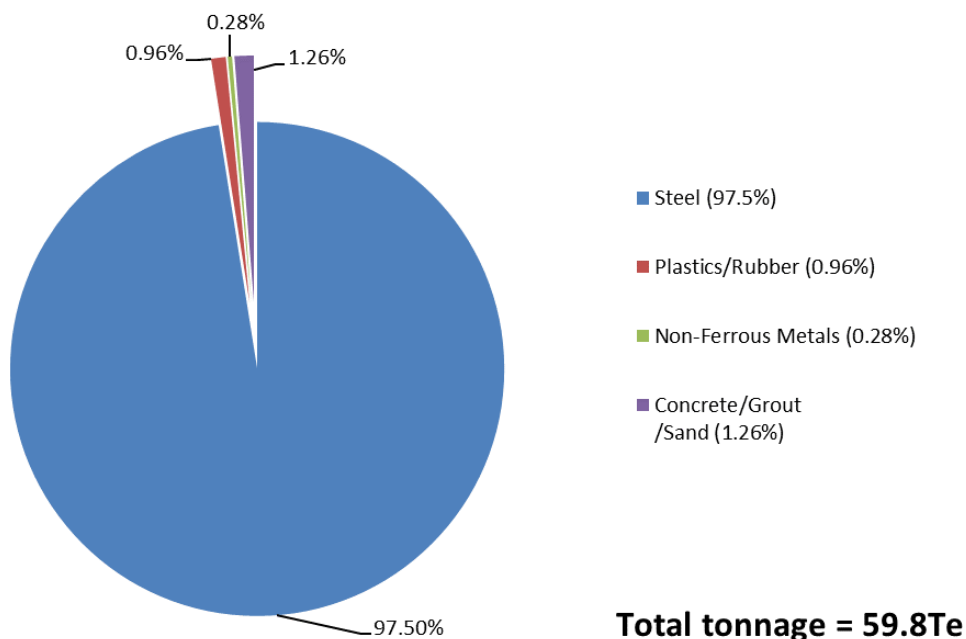


Figure 2.1: Pie Chart of Estimated Inventories (Installation)

Please refer the Environmental Impact Assessment [1] in Section 7 for further details.

3. REMOVAL AND DISPOSAL METHODS

Wastes generated during decommissioning will be segregated and recorded by type and periodically transported to shore in an auditable manner through licensed waste contractors. Steel and other recyclable metal are estimated to account for the greatest proportion of the materials inventory.

3.1 Topsides

n/a

3.2 Jacket

n/a

3.3 Subsea Installations and Stabilisation Features

Table 3.1: Subsea Installation and Stabilisation Features			
Subsea installation and stabilisation features	Number	Option	Disposal Route (if applicable)
Wellhead	1	Complete removal as part of campaign to abandon wells	Return to shore for reuse, unless the condition is found to preclude refurbishment, in which case it will be recycled.
Manifold	n/a		
Template	n/a		
Wellhead Protection Structure	1	Complete removal	Return to shore for reuse, unless the condition is found to preclude refurbishment in which case it will be recycled.
Tree	1	Complete removal as part of campaign to abandon wells	Return to shore for reuse, unless the condition is found to preclude refurbishment in which case it will be recycled.
Concrete Mattresses	n/a		
Grout Bags	n/a		
Formwork	n/a		
Froned Mats	n/a		
Rock Emplacement	n/a		
Other	n/a		

3.4 Pipelines

n/a

3.5 Pipeline Stabilisation Feature(s)

n/a

3.6 Wells

Table 3.2: Well Abandonment

The Ann field consists of three wells. The single A4 production well within the wellhead protection structure (49/6a-A4z) is covered by this Decommissioning Programme. The well listed in Section 2.4 (Table 2.5) will be abandoned in accordance with Oil & Gas UK Guidelines for the Suspension and Abandonment of Wells, Issue 5, July 2015. A Master Application Template (MAT) and the supporting Subsidiary Application Template(s) (SAT) will be submitted in support of works carried out. A PON5 and the appropriate marine licenses will also be submitted to BEIS for application to abandon the well. Well abandonment is scheduled to occur in 2017.

3.7 Drill Cuttings

There is no existing drill cutting pile associated with Ann A4. This conclusion is supported by the 2016 survey data. The bathymetry data obtained from the 2016 survey showed no evidence of an accumulation of cuttings at the well location (see Section 2 of the Ann Pre-decommissioning Environmental Survey [2]). The level of barium (an indicator of the presence of contamination from drilling) was low and homogeneous at all stations and below comparison values (see Section 2.7 of the Ann Pre-decommissioning Environmental Survey [2]).

3.8 Waste Streams

Table 3.3: Waste Stream Management Methods

Waste Stream	Removal and Disposal method
Bulk liquids	n/a
Marine growth	Removed offshore. Disposed of according to guidelines and company policies.
NORM/LSA Scale	Monitoring for NORM will be done offshore by the Radiation Protection Adviser and any NORM encountered will be dealt with and disposed of under the appropriate permit, following agreed procedures and, subject to final contractual arrangements, will be managed by Enviroco and NORM Solutions when it arrives at Great Yarmouth
Asbestos	n/a
Other hazardous wastes	Will be recovered to Great Yarmouth and disposed of under the appropriate permit and subject to final contractual arrangements will be managed in accordance with Enviroco guidelines and company policies
Onshore Dismantling sites	Appropriate licensed sites will be selected. Dismantling site must demonstrate proven disposal track record and waste stream management throughout the deconstruction process and demonstrate their ability to deliver innovative reuse and recycling options. Materials will be recovered to Great Yarmouth and subject to final contractual arrangements will be managed by Enviroco our waste contractor

Table 3.4: Inventory Disposition

Inventory	Total Inventory Tonnage	Planned tonnage to shore	Planned tonnage decommissioned <i>in situ</i>	Planned tonnage left in situ for potential reuse
Installations	59.8	59.8	0	0
Pipelines	n/a	n/a	n/a	n/a

All recovered material will be transported onshore for reuse, recycling or disposal. It is not possible to predict the market for reusable materials with any confidence; so the figures in Table 3.5 are disposal aspirations.

Table 3.5: Reuse, Recycle & Disposal Aspirations for Recovered Material			
Inventory	Reuse	Recycle	Disposal
Installations (59.8 Tonnes)	Approx. 45%	Approx. 55%	<5%
Pipelines	n/a	n/a	n/a

Please refer the Environmental Impact Assessment [1] for further details.

4. ENVIRONMENTAL IMPACT ASSESSMENT

4.1 Environmental Sensitivities

Table 4.1: Environmental Sensitivities	
Environmental Receptor	Main Features
Conservation Interests	<p>No Annex I habitats have been identified in any surveys undertaken within or adjacent to the area of activity. As the area is within a Harbour Porpoise Possible SAC, there is potential for a number of Annex II species to be present within the vicinity. However, the nature of the activities being undertaken is anticipated to have low impact significance upon these species. The infrastructure is close to the North Norfolk Sandbank SCI, however the activities are not anticipated to have any impacts upon the site due to the small scale of the activities and that they are not within the site. In the event of a large hydrocarbon release, a proportion of the hydrocarbon could be captured within the seabed sediment. However, the possibility of such an event and the low concentrations that would be recorded within the sediment (comparable to background concentrations) mean the significance of the impact is considered low.</p>
Seabed	<p>The seabed in the area comprises fine to medium sand developed into megaripples with scattered shell fragments and occasional gravel including pebbles and cobbles. In general the marine habitats and their associated species depend on the available substrate and sediment composition. Multivariate comparison of the survey data concluded that the macrofaunal community in the Ann survey area were characterised mainly according to natural variation in sediment composition (rather than contaminants).</p> <p>The removal of wellhead protection structure from the seabed will impact the seabed. Sensitive marine habitats are likely to be damaged as a result of seabed disturbance and the temporary placement of materials on the seabed. In addition, there is potential for re-suspended sediment to settle on sensitive habitat and species smothering them. However, the extent of the disturbance is likely to be minimal in comparison to the area of available habitat. The habitat observed is not unique to the area and represents a small proportion to that available within the wider Southern North Sea. In the event of a large hydrocarbon release, it was found that a proportion of the hydrocarbon could be captured within the sediment. However, given the likelihood of such an event and the low concentrations that would be recorded within the sediment (comparable to background concentrations) the significance of the impact is considered low.</p>
Atmosphere	<p>In general, offshore meteorological conditions will lead to rapid dispersion and dilution of atmospheric emissions. Impacts arising as a result of emissions (largely comprising combustion gases) are therefore likely to be short-term and highly localised and are assessed as of low significance.</p> <p>The emission of combustion gases will contribute to global effects (e.g. global warming). However, given the relatively small volume of gases to</p>

Table 4.1: Environmental Sensitivities

Environmental Receptor	Main Features
	be emitted and the control and mitigation measures that will be implemented the significance of the impact is low.
Birds	The greatest risk to birds from the activities would be the accidental occurrence of a large hydrocarbon release. The Ann area has high or very high vulnerability of seabirds to surface pollution (only September is of moderate vulnerability)[1]. Although birds could be affected by the diesel release, given relatively short duration of the activities and the relatively short duration it would be expected to remain on the sea surface (therefore being available to oil birds' feathers) the potential impact is assessed as of low significance.
Fish	<p>Fish populations in the area could be affected by seabed disturbance, the generation of underwater noise and chemical / hydrocarbon releases associated with activities. It is not anticipated that large amounts of turbidity will be generated which could impact fish themselves, however even a small amount of turbidity or disturbance of the seabed itself could have impacts to spawning and nursery grounds. A number of species are known to use the seabed in the area around the Ann A4 wellhead protection structure as spawning and nursery grounds. Different species spawn at different times; therefore it is likely that whenever the activities are undertaken they could coincide with a spawning period. However, information regarding spawning grounds and nursery grounds covers large areas, the seabed is representative the wider area and therefore the significance of any impact has been assessed as low. The same is the case for nursery grounds.</p> <p>The levels of noise generated are not anticipated to have any physiological impact to fish. It is likely that the activities will result in a startled response, moving fish away from the area.</p>
Marine Mammals	<p>Given the existing background noise levels and the relatively short duration of the activities, the underwater noise levels generated by vessels are unlikely to lead to physiological damage to marine mammals.</p> <p>White beaked dolphin and harbour porpoise (an Annex II (Habitats Directive) species) have been recorded in the area. The locally resident or transiting populations of marine mammals may be disturbed by noise in the immediate vicinity, but any such disturbance is expected to be short-term and the impact has been assessed as of low significance.</p>
Fishing Industry	Impacts on fishing industry have been assessed as of low significance as the decommissioning activities will be relatively short-term and within the 500m exclusion zone around the wellhead protection structure. The area is predominantly targeted for demersal species.
Other Users of the Sea	There will be a relatively short period when vessels will be operating around the wellhead protection structure and there will be a higher than normal level of shipping activity. The associated effects will be short-term. There are no planned wind farm developments or aggregate extraction licenses at the site, although there is an aggregate area to the north of the site. The activities are not anticipated to impact on the aggregate area.
Onshore Communities	The impact of the disposal of waste on onshore communities would be slightly beneficial as it will contribute to the continuation of jobs. However this is expected to be small as the disposal sites already exist and the volume of waste is relatively small.

4.2 Potential Environmental Impacts and their Management

Environmental Impact Assessment Summary:

There will be some planned and unplanned environmental impacts arising from decommissioning the Ann A4 installation. Long-term environmental impacts from the decommissioning operations are expected to be low. Incremental cumulative impacts and trans-boundary effects associated with the planned decommissioning operations are expected to be low. There will be a requirement for a new environmental management protection plan to be produced and submitted to the BEIS should the Decommissioning Programme change.

Overview:

Table 4.2: Environmental Impact Management		
Activity	Main Impacts	Management
Topsides Removal	n/a	n/a
Jacket/Floating Facility Removal	n/a	n/a
Subsea Installation Removal	For decommissioning and removal of the WHPS and the wellhead the impacts are disturbance of the seabed by lifting, temporary placement on seabed if required, noise from vessels and cutting and operational discharges from vessels. Impacts are expected to be short-term and localised and of low significance.	Activities will be planned to be executed as efficiently as possible, minimising cutting and disturbance of the seabed in order to reduce the potential for impact on the area around the wellhead. Vessels will be managed to minimise the durations required and associated discharge. In addition, on board operational practices will address fuel efficiency, noise management and minimise waste.
Decommissioning Pipelines	n/a	n/a
Decommissioning Stabilisation Features	n/a	n/a
Decommissioning Drill Cuttings	n/a	n/a

5. INTERESTED PARTY CONSULTATIONS

During the public consultation period (08 November to 08 December 2016), copies of the Decommissioning Programme and supporting documents were forwarded to the following Statutory Consultees:

- The National Federation of Fishermen's Organisations (NFFO);
- The Scottish Fishermen's Federation (SFF);
- The Northern Ireland Fish Producer's Organisation (NIFPO); and,
- Global Marine Systems Limited (GMS).

Meetings and telephone calls have been held with NFFO to advise of progress and to provide more detail of the proposals.

Copies of the Decommissioning Programme and supporting documents were also made available as a download from the Centrica Decommissioning website:

<http://www.centrica.com/ann>

A bound copy of the Decommissioning Programme was also made available in the Great Yarmouth Community Library.

A public notice was published in both the Eastern Daily Press and the London Gazette on 08 November 2016 (please refer to Appendix A.1 for a copy of the public notice). The public notice gave instructions for representations to be made in writing by Thursday 08 December 2016. Centrica received no comments or any written or verbal representation from the public in direct response to the public notice or during the public consultation period.

Copies were also submitted for consideration to BEIS.

Table 5.1: Summary of Stakeholder Comments		
Who	Comment	Response
INFORMAL CONSULTATIONS		
STATUTORY CONSULTATIONS		
National Federation of Fishermen's Organisation	The NFFO have no adverse comments to make on the proposals	Refer Appendix A.2
Scottish Fishermen's Federation	Given the locality of this particular Field, the SFF advise that the SFF is content to leave it with the National Federation of Fishermen's Organisations (NFFO) to respond on the proposals	Refer Appendix A.3
Northern Irish Fish Producers Organisation	The NIFPO have no comment to make on the proposals, but thanked Centrica for involving them in the process	Refer Appendix A.4
Global Marine Systems Limited	GMS don't have any specific comments on the programme of works itself as no in-service submarine cables should be directly affected in the immediate vicinity. The organisation did explain that there are proposed developments in the North Sea with fibre to platform connections and further telecommunication connections, and that Centrica should remain aware of such proposals in relation to future plans	Refer Appendix A.5 Centrica will keep Kingfisher informed of any planned operations
Public	No concerns or objections were raised	

6. PROGRAMME MANAGEMENT

6.1 Project Management and Verification

A Centrica project management team will be appointed to manage the operations of competent contractors selected for all decommissioning activities. The team will ensure the decommissioning is executed safely, in accordance with legislation and Centrica Health and Safety principles. Changes to the Decommissioning Programme will be discussed with the BEIS and any necessary approval sought.

6.2 Post-Decommissioning Debris Clearance and Verification

The associated pipeline, and umbilical, and stabilisation material between Ann A4 WHPS and the Ann Installation (as shown in Figure 1.2) remain within the existing Ann 500m safety zone and will be part of the wider Ann decommissioning. As such the Ann A4 WHPS and associated pipeline and umbilical will be subject to a debris survey and trawlability survey when decommissioning activities have been completed for the Ann field.

6.3 Schedule

A proposed schedule is provided in Figure 6.1. The activities are subject to the acceptance of the Decommissioning Programme presented in this document and any unavoidable constraints (e.g. vessel availability) that may be encountered while executing the decommissioning activities. Therefore, activity schedule windows have been included to account for this uncertainty.

The commencement of offshore decommissioning activities is constrained by the execution of other work beforehand, and any changes in priority. The current intention is that Ann A4 well abandonment activities and removal of the WHPS will be carried out in the summer months in 2017.

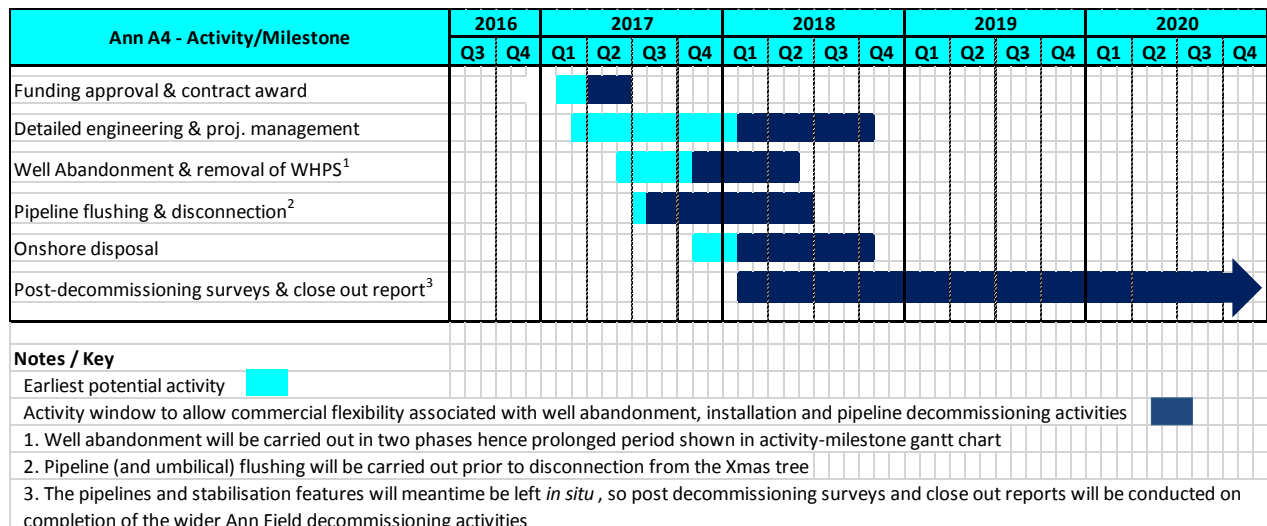


Figure 6.1: Gantt Chart of Project Schedule

6.4 Costs

Table 6.1: Provisional Decommissioning Programme Costs	
Item	Estimated Cost (£m)
Operator Project Management	tba
Facility running/owner costs	tba
Well plugging and abandonment	tba
Facilities/pipelines making safe	tba
Topsides preparation	n/a
Topsides removal	n/a
Substructure removal (incl. subsea installations)	tba
Topsides and substructure onshore recycling	n/a
Subsea infrastructure (pipelines, umbilical lines)	tba
Site remediation	tba
Monitoring	tba
TOTAL	tba

6.5 Close Out

A close out report will be submitted to BEIS following completion of the offshore works for the whole of the Ann field, including debris clearance and post-decommissioning surveys, as required in the BEIS guidance notes. The report will explain any variance from the Decommissioning Programme.

6.6 Post-Decommissioning Monitoring and Evaluation

A post decommissioning “as left” survey centred around the location of the WHPS will be carried out on completion of removal of the WHPS. The survey will focus visually on the “as left” status and physical disturbance of the site. Results of this survey will be available once the work is completed. The requirement for post-decommissioning surveys will be agreed between BEIS and Centrica taking into consideration the decommissioning of the wider Ann field. As the Ann A4 installation lies within the wider Ann field, further decommissioning work shall be performed in close proximity and this may provide the opportunity for further monitoring in combination with decommissioning of other assets in the local area.

7. SUPPORTING DOCUMENTS

Table 7.1: Supporting Documents	
Document Number	Title
[1] CEU-DCM-SNS0096-REP-0002	Ann A4 Decommissioning Environmental Impact Assessment
[2] Gardline 10786.2	Ann Pre-decommissioning Environmental Survey part of the A Fields Pre-decommissioning Environmental Survey (June 2016)

APPENDIX A PUBLIC NOTICE AND CONSULTEE CORRESPONDENCE

Appendix A.1 Public Notices

<p style="text-align: center;">CENTRICA NORTH SEA LTD THE PETROLEUM ACT 1998 ANN A4 DECOMMISSIONING PROJECT</p> <p>Centrica North Sea Ltd has submitted, for the consideration of the Secretary of State for Business, Energy & Industrial Strategy, a draft Decommissioning Programme for the Ann A4 installation in accordance with the provisions of the Petroleum Act 1998. It is a requirement of the Act that interested parties be consulted on such decommissioning proposals.</p> <p>The facilities covered by the Decommissioning Programme are:</p> <ul style="list-style-type: none"> • The Ann A4 subsea well and Installation, 116km offshore UK block 49/6a in the southern North Sea, including the wellhead, wellhead protection structure and tree. • The flowline and umbilical connecting Ann A4 to the Ann manifold will meantime be flushed, disconnected and left in situ for decommissioning at later date. <p>Centrica North Sea Ltd hereby gives notice that a summary of the Ann A4 Decommissioning Programme can be viewed at the internet address: www.centrica.com/ann</p> <p>Alternatively a hard copy of the Programme can be inspected by contacting Ross Davidson, Senior Public Relations Manager, at the following location during office hours:</p> <p>Centrica iQ Building 15 Justice Mill Lane Aberdeen AB11 6EQ</p> <p>A hard copy of the Programme will also be made available at Great Yarmouth Community Library, Tolhouse Street, Great Yarmouth, Norfolk, NR30 2SH.</p> <p>Representations regarding the Ann A4 Decommissioning Programme should be submitted in writing to Ross Davidson, Senior Public Relations Manager, at the above address. Representations should be received by Thursday, 8 December 2016, and should state the grounds upon which any representations are being made.</p> <p>Date: 8 November, 2016 Ross Davidson, Senior Public Relations Manager, Centrica, iQ Building, 15 Justice Mill Lane, Aberdeen, AB11 6EQ</p>	<h2>ENVIRONMENT & INFRASTRUCTURE</h2> <h3>ENERGY</h3> <p>CENTRICA NORTH SEA LTD THE PETROLEUM ACT 1998 MARKHAM ST-1 DECOMMISSIONING PROJECT</p> <p>Centrica North Sea Ltd has submitted, for the consideration of the Secretary of State for Energy and Climate Change, draft Decommissioning Programmes for the ST-1 installation and associated pipelines in accordance with the provisions of the Petroleum Act 1998. It is a requirement of the Act that interested parties be consulted on such decommissioning proposals.</p> <p>The assets covered by the Decommissioning Programmes are:</p> <ul style="list-style-type: none"> • The Markham ST-1 field, 120km offshore UK, block 49/5a and 49/10b in the southern North Sea, including the platform structure • The pipelines connecting ST-1 to the nearby Markham J6A platform offshore Netherlands, • The concrete mattresses and grout bags used as subsea pipeline stabilisation features. <p>Centrica North Sea Ltd hereby gives notice that a summary of the ST-1 Decommissioning Programmes can be viewed at the internet address: www.centrica.com/decommissioning</p> <p>Alternatively a hard copy of the Programmes can be inspected by contacting Ross Davidson, Senior Public Relations Manager, at the following location during office hours:</p> <p>Centrica iQ Building 15 Justice Mill Lane Aberdeen AB11 6EQ</p> <p>A hard copy of the Programmes will also be made available at Great Yarmouth Community Library, Tolhouse Street, Great Yarmouth, Norfolk, NR30 2SH.</p> <p>Representations regarding the ST-1 Decommissioning Programmes should be submitted in writing to Ross Davidson, Senior Public Relations Manager, at the above address. Representations should be received by Wednesday, 10 August 2016, and should state the grounds upon which any representations are being made.</p> <p>Date: 13 July 2016 Ross Davidson, Senior Public Relations Manager, Centrica, iQ Building, 15 Justice Mill Lane, Aberdeen, AB11 6EQ (2572886)</p>
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Public Notices: Eastern Daily Press & The London Gazette (both 08 November 2016)

Appendix A.2 NFFO – Mr Alan Piggott via Email

From: Alan Piggott
Sent: 06 December 2016 11:55
To: Davidson, Ross
Subject: EXT RE: Submission of Draft Ann A4 Decommissioning Programme

Morning Ross

Please excuse my tardiness on this matter, I can confirm we have no adverse comment on the decommissioning program

Best Regards, Alan Piggott, General Manager, National Federation of Fishermen's Organisations, 30 Monkgate, York, YO31 7PF

From: Davidson, Ross
Sent: 08 November 2016 10:02
To: apiggott@nffo.org.uk
Subject: Submission of Draft Ann A4 Decommissioning Programme
Dear Alan,

Centrica North Sea Ltd has submitted, for the consideration of the Secretary of State for Business, Energy & Industrial Strategy, a draft Decommissioning Programme for the Ann A4 installation in accordance with the provisions of the Petroleum Act 1998. It is a requirement of the Act that interested parties be consulted on such decommissioning proposals.

The assets covered by the Decommissioning Programme are:

- The Ann A4 subsea well and Installation, 116km offshore UK block 49/6a in the southern North Sea, including the wellhead, wellhead protection structure and tree.
- The flowline and umbilical connecting Ann A4 to the Ann manifold will meantime be flushed, disconnected and left *in situ* for decommissioning at later date.

Centrica North Sea Ltd hereby gives notice that from Tuesday, 8 November, 2016, the Ann A4 Decommissioning Programme can be viewed at the internet address: www.centrica.com/ann

Alternatively, electronic copies of the Decommissioning Programme and Environmental Impact Assessment are attached to this email.

Separately you will receive a document transmittal from our document control department, please can you return this to acknowledge receipt.

Please can you confirm that you've received all the information you require, and if you have any questions or concerns, please make any representations to myself by Thursday, 8 December, 2016.

Best regards, Ross Davidson, Senior Public Relations Manager, Centrica plc
+44 (0) 7557 617098, www.centrica.com

Appendix A.3 SFF – Mr John Watt via Email

From: John Watt
Sent: 10 November 2016 15:17
To: Davidson, Ross
Cc: Axon, Simon; Aberdeen DC; Steven Alexander
Subject: RE: Submission of Draft Ann A4 Decommissioning Programme

Dear Ross,

Many thanks for the information provided on the Ann A4 decommissioning Programme.

Given the Ann A4 well and installation is located in the Southern North Sea, we would expect our colleagues from the NFFO to give comment on this particular programme as It will have a greater impact on their member vessels.

Kind regards, John Watt, Industry Advisor, Scottish Fishermen's Federation
24 Rubislaw Terrace, Aberdeen, AB10 1XE

From: Davidson, Ross [mailto:Ross.Davidson@centrica.com]
Sent: 08 November 2016 10:03
To: John Watt
Cc: Axon, Simon; Aberdeen DC
Subject: Submission of Draft Ann A4 Decommissioning Programme

Dear John,

Centrica North Sea Ltd has submitted, for the consideration of the Secretary of State for Business, Energy & Industrial Strategy, a draft Decommissioning Programme for the Ann A4 installation in accordance with the provisions of the Petroleum Act 1998. It is a requirement of the Act that interested parties be consulted on such decommissioning proposals.

The assets covered by the Decommissioning Programme are:

- The Ann A4 subsea well and Installation, 116km offshore UK block 49/6a in the southern North Sea, including the wellhead, wellhead protection structure and tree.
- The flowline and umbilical connecting Ann A4 to the Ann manifold will meantime be flushed, disconnected and left *in situ* for decommissioning at later date.

Centrica North Sea Ltd hereby gives notice that from Tuesday, 8 November, 2016, the Ann A4 Decommissioning Programme can be viewed at the internet address: www.centrica.com/ann

Alternatively, electronic copies of the Decommissioning Programme and Environmental Impact Assessment are attached to this email.

Separately you will receive a document transmittal from our document control department, please can you return this to acknowledge receipt.

Please can you confirm that you've received all the information you require, and if you have any questions or concerns, please make any representations to myself by Thursday, 8 December, 2016.

Best regards, Ross Davidson, Senior Public Relations Manager, Centrica plc

+44 (0) 7557 617098, www.centrica.com

Appendix A.4 NIFPO – Mr Ian Kelly via Email

From: Wayne Sloan

Date: 6 December 2016 at 12:31:16 GMT

To: "Davidson, Ross" <Ross.Davidson@centrica.com>

Subject: Re: EXT Re: FW: Submission of Draft Ann A4 Decommissioning Programme

Hi Ross,

Apologies for not getting back to you sooner. We have no issues to raise on the project. Thanks for keeping us involved in the process.

Regards, Wayne Sloan, Offshore Manager, FP Offshore Services (NI) Ltd

From: Davidson, Ross [mailto:Ross.Davidson@centrica.com]

Sent: 08 November 2016 10:01

To: nifpo@btconnect.com

Cc: Axon, Simon; Aberdeen DC

Subject: Submission of Draft Ann A4 Decommissioning Programme

Dear Ian,

Centrica North Sea Ltd has submitted, for the consideration of the Secretary of State for Business, Energy & Industrial Strategy, a draft Decommissioning Programme for the Ann A4 installation in accordance with the provisions of the Petroleum Act 1998. It is a requirement of the Act that interested parties be consulted on such decommissioning proposals.

The assets covered by the Decommissioning Programme are:

- The Ann A4 subsea well and Installation, 116km offshore UK block 49/6a in the southern North Sea, including the wellhead, wellhead protection structure and tree.
- The flowline and umbilical connecting Ann A4 to the Ann manifold will meantime be flushed, disconnected and left *in situ* for decommissioning at later date.

Centrica North Sea Ltd hereby gives notice that from Tuesday, 8 November, 2016, the Ann A4 Decommissioning Programme can be viewed at the internet address: www.centrica.com/ann

Alternatively, electronic copies of the Decommissioning Programme and Environmental Impact Assessment are attached to this email.

Separately you will receive a document transmittal from our document control department, please can you return this to acknowledge receipt.

Please can you confirm that you've received all the information you require, and if you have any questions or concerns, please make any representations to myself by Thursday, 8 December, 2016.

Best regards, Ross Davidson, Senior Public Relations Manager, Centrica plc

+44 (0) 7557 617098, www.centrica.com

Appendix A.5 Global Marine Systems Ltd – Mr John Wrottesley via Email

From: Wrottesley, John (GMSL)
Sent: 30 November 2016 10:43
To: Davidson, Ross
Cc: Axon, Simon; Aberdeen DC
Subject: RE: Submission of Draft Ann A4 Decommissioning Programme

Dear Ross,

I have reviewed the attachments and have no significant comments, there are submarine cables nearby but not in the immediate vicinity and they are unlikely be affected:

- Well head approximately 5.5 km north of an Out of Service (OOS) fibre optic cable
- Well head approx. 5.5 km west of OOS fibre optic cable
- Also approximately 21 km west of the in service fibre optic North Sea Comm Seg 3

I also suggest that future cables are considered in your plans as there are proposed developments in the North Sea with fibre to platform connections and further telecommunications and interconnector propositions, it will be necessary to verify the future existing cables prior to any operations taking place, and include the usual notifications prior to operations taking place to Kingfisher, UKHO and any cable owners if any are identified at a future date to fully inform other sea users for safety.

Best regards, John

From: Davidson, Ross [mailto:Ross.Davidson@centrica.com]
Sent: 08 November 2016 10:05
To: john.wrottesley@globalmarinesystems.com
Cc: Axon, Simon; Aberdeen DC
Subject: Submission of Draft Ann A4 Decommissioning Programme

Dear John,

Centrica North Sea Ltd has submitted, for the consideration of the Secretary of State for Business, Energy & Industrial Strategy, a draft Decommissioning Programme for the Ann A4 installation in accordance with the provisions of the Petroleum Act 1998. It is a requirement of the Act that interested parties be consulted on such decommissioning proposals.

The assets covered by the Decommissioning Programme are:

- The Ann A4 subsea well and Installation, 116 km offshore UK block 49/6a in the southern North Sea, including the wellhead, wellhead protection structure and tree.
- The flowline and umbilical connecting Ann A4 to the Ann manifold will meantime be flushed, disconnected and left *in situ* for decommissioning at later date.

Centrica North Sea Ltd hereby gives notice that from Tuesday, 8 November, 2016, the Ann A4 Decommissioning Programme can be viewed at the internet address: www.centrica.com/ann

Alternatively, electronic copies of the Decommissioning Programme and Environmental Impact Assessment are attached to this email.

Separately you will receive a document transmittal from our document control department, please can you return this to acknowledge receipt.

Please can you confirm that you've received all the information you require, and if you have any questions or concerns, please make any representations to myself by Thursday, 8 December, 2016.

Best regards, Ross Davidson, Senior Public Relations Manager, Centrica plc

+44 (0) 7557 617098, www.centrica.com