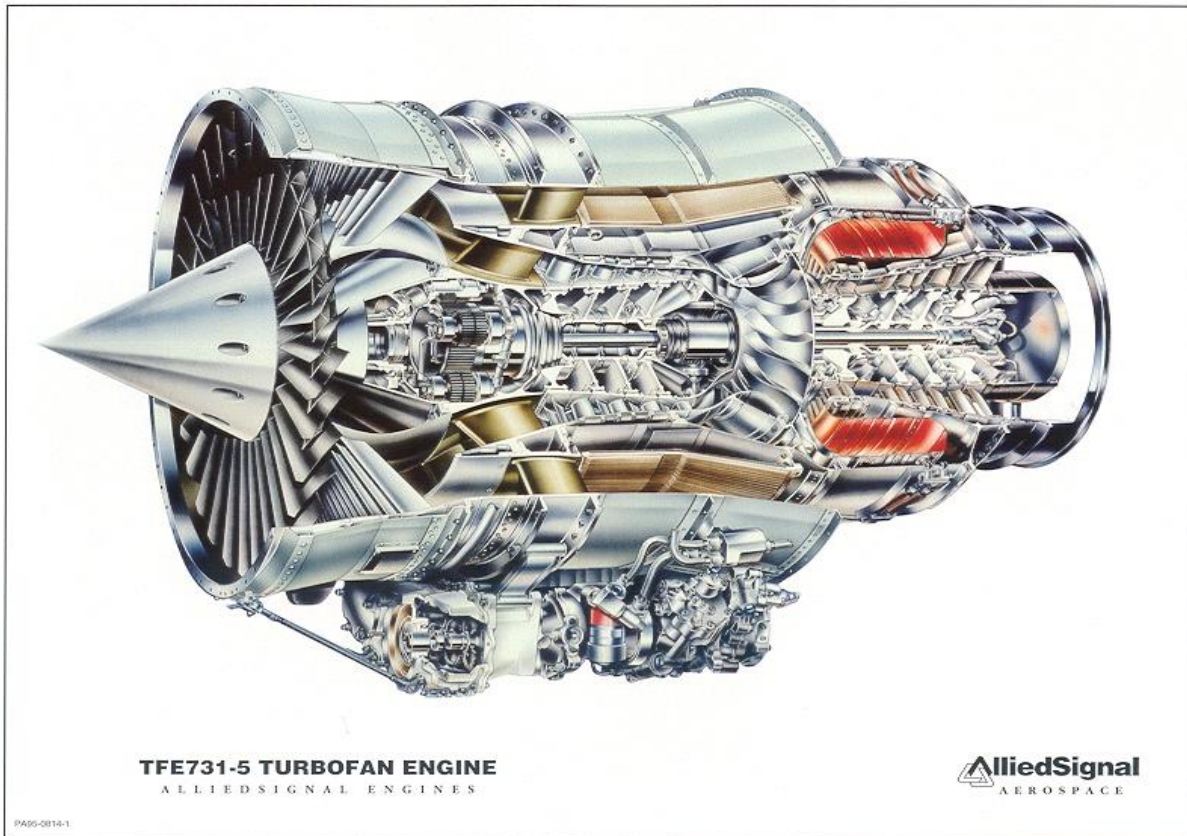


## AEROSPACE-WATERFORD



### IPPC Licence: P0698-01 Action Plan for the Protection of Surface Water & Groundwater December 2021

Revision	Date	Reviewed by	Signature
Original	July 2012	Colin Stevens	
Review & update	June 2014	Colin Stevens	
Review & Update	Feb 2019	Joy Cox	
Review & Update	Dec 2020	Joy Cox	
Review & update	Dec 2021	Joy Cox	



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**Appendices to Plan attached separately**

## 1. OVERVIEW

The EPA carried out a site inspection on April 25<sup>th</sup>, 2012. The inspection was carried out by Inspector Darragh O'Brien. One of the Observations made during the inspection was the site had not produced a specific Action Plan to protect groundwater and surface water. The Agency has identified the protection of soil and water receptors from potential contaminants as a priority issue for 2012 and has promoted this issue to ensure that proactive measures are put in place by Licence holders to protect soil and water receptors.

A further site visit on 19<sup>th</sup> March 2014 by Inspector Eimear O'Keeffe, recommended this Action Plan be reviewed and revised as necessary.

The Agency has requested Licence holders to: -

- a) Review the management and operational arrangements in place at their facility to determine what additional measures are required for the prevention of contaminated discharges to ground and surface water
- b) Prepare a plan with timeframes for the additional measures
- c) Include a review of the plan as part of the 2012 Annual Environmental Report

A further site visit on 13<sup>th</sup> Feb 2019 By Inspector Anthea Southey (ref Site Visit Report SV17109) recommended an annual review to the plan and update as necessary. Details of any inspections and measures to reduce metal dust generation and transfer to external yard and roof areas. The site was also required to conduct annual metal analysis of surface water samples and submit results to the Agency.

A virtual compliance assessment by the Agency on 18<sup>th</sup> November 2011 (ref Site Visit Report SV22084) by Inspector Anthea Southey. This assessment recommended that records of the surface water visual inspections shall indicate if the surface water drains are dry or if there is a flow or no flow. This report issued the Licensee with 1 non-compliance in relation to failure to sample and monitor surface water in accordance with the licence during 2011. Actions to address this non-compliance are currently being communicated to the Agency.

## 2. COMPANY DETAILS

**Licence Register Number:** P0698-01  
**Name:** Honeywell Aerospace-Waterford  
**Address:** Unit 328  
Cork Road Industrial Park,  
Waterford.

**Contact Information:** Joy Cox, Site HSE Leader.  
Tel: 051-303671.  
Email: joy.cox@honeywell.com

### 2.1 Company Description

Honeywell Aerospace-Waterford is a team based manufacturing facility with a strong emphasis on empowerment, producing a range of precision components for the aircraft engine industry. The parts manufactured in the plant comprise compressor blades & vanes & fan blades. The parts are made from titanium & stainless steel bar stock. It takes 40 operations for completion of a part from start to finish.

The plant opened for business in 1986 and employs 60 people at a state of the art forging & machining facility in Waterford and is the primary source of cold section airfoil compressor blades to Honeywell Aerospace Phoenix, Arizona USA. Falcon, Dassault, Gulfstream and Lear are among the company's customers.

This is an aerospace company so Environmental, Health, Safety & Quality procedures are of the utmost importance. A copy of the Honeywell Corporate policy is available in Section 2.3.

The main hours of operation are over two shifts between 06:00am and 10:00pm. Some cells due to product demand may operate from time to time on a 3-shift basis.

There is a 2 week shutdown period at the beginning of August and approximately 1 week shutdown during the Christmas/New Year holiday period.

In Quarter 4 of 2013 Honeywell awarded the Waterford site with new business - the manufacture of compressor blades for a military application. As these parts are very similar to the aerospace parts we currently manufacture. This did not bring a change to the scope of works as set out in our IPPC licence P0698-01. Extra machinery has been installed on site but with no change to raw materials no new waste streams will be introduced and the environmental affect will be negligible.

In 2020 the site had two by one week full site shutdowns as a result of the COVID-19 pandemic. The normal 2 week summer shutdown was also extended to a full site closure for 3 weeks in 2020. Throughout 2021 the site continued to operate as normal despite the COVID-19 pandemic still present. With a downturn in business the site head count fell to 60 people in 2020, 35 direct Operators and 25 in support. The only site shutdown in 2021 was for a 2-week maintenance period in the summer. A 1-week full site shutdown is pending for the Christmas period 2021.

## **2.2 Corporate Environmental Responsibility**

Honeywell Aerospace-Waterford management and staff recognises the importance of environmental protection as an essential requirement of operations. The following are among the stated values of Honeywell Aerospace Ireland:

- That our products will be safe to make and to use.
- We will conserve natural resources and we will continue to invest in better environmental protection.
- Honeywell Aerospace-Waterford will undertake to conduct its business in a manner, which protects the environment of the Customers, Employees and Community in which it operates.

The challenge is to achieve a high quality environment, to this end; the company is committed to continuous improvement - "re-think, reduce, reuse & recycle"- at all levels throughout the organisation.

## 2.3 Honeywell's Corporate Policy



### **Sustainable Opportunity Policy Honeywell's Commitment to Health, Safety and the Environment**

By integrating health, safety and environmental considerations into all aspects of our business, we protect our employees and contractors, our communities and the environment, achieve sustainable growth and accelerated productivity, drive compliance with all applicable regulations and develop technologies that expand the sustainable capacity of our world. Our health, safety and environmental management systems reflect our values and help us meet our business objectives.

- We protect the safety and health of our employees and contractors, and minimize the environmental footprint of our operations through efforts to prevent illness, injury and pollution.
- We actively promote and develop opportunities for expanding sustainable capacity by increasing energy and water efficiency, improving security and safety, and reducing emissions of harmful pollutants.
- We are committed to compliance with all of our health, safety, environmental and legal requirements everywhere we operate.
- Our commitment to health, safety and the environment is an integral aspect of our design of products, processes and services, and of the lifecycle management of our products.
- Our management systems apply a global standard that provides protection of both human health and the environment during normal and emergency situations.
- We identify, control and endeavor to reduce hazards and associated risk (to employees and contractors), emissions, waste and inefficient use of resources, including energy and water.
- We are open with stakeholders and work within our communities to advance laws, regulation and practices that safeguard the public.
- We abide by the company's own strict standards in cases where local laws are less stringent.
- Our senior leadership and individual employees are engaged in aspects of health, safety and the environment and are accountable for their role in meeting our commitments.
- We measure and periodically review our progress and strive for continuous improvement.

These are our commitments to health, safety, and the environment, and to creating Sustainable Opportunity everywhere we operate.

Darius Adamczyk  
Chairman and CEO

Mike Madsen  
President and CEO, Honeywell Aerospace

Alec Crosse  
Site Leader

### 3. CURRENT CONTROLS

The 1992 Amendments to the Environmental Protection Agency Act, requested the site to ensure the protection of ground and surface water.

This report contains a review of current water management practices, operational arrangements and an action plan which shall be considered to address potential areas of concern within the installation.

The site operates under Honeywell Corporate policies and procedures. These procedures provide operational consistency what makes it possible to address issues and concerns with uniformity. Complying with Honeywell's corporate policies and procedures is expected from each employee of the site. Review and revision of site procedures are discussed at least once every 3 years.

The following site procedures have been produced to meet the requirements of the Honeywell corporate procedures and are relevant in ground and surface water protection:

- HSEF 26 Housekeeping
- HSE-43 – Wastewater Discharges
- HSE-45 – Waste Management
- HSE-46 – Spill Prevention & Control
- HSE-93 – Environmental Accident Prevention Policy
- HSE-98 – Rinsing of Empty Chemical Barrels
- HSE-113 – Hazardous Chemical Management
- HSE118 – Storm Water and Process Water Inspections

#### 3.1 Emissions to Surface Waters

Honeywell Aerospace-Waterford discharges non-process water at discharge points SW1 and SW2 in accordance with Condition 5 and Schedule C.2.3 of the site's operating IPPC Licence (Reg. No. P0698-01).

Non-process water generated onsite consists of:

- Storm water run-off from roofs.
- Storm water run-off from areas including car parks and paved areas.

Visual examination of surface water discharge is conducted on site on a **daily basis** and a log made of any observations noted. Surface water discharges at SW1 and SW2 are measured on a **weekly basis** for pH and a visual inspection and a log made. However this is not always possible as the sampling points may not contain any water during dry weather. Current year records are held on site by HSE, with previous years records available in hard copy via site HSE. Resulting from the virtual compliance assessment in November 2021, the site has amended the surface water visual inspection template to indicate if the surface water drains are dry or if there is a flow or no flow.

On a **quarterly basis** samples from agreed discharge monitoring points SW1 and SW2 are taken and analysed for COD and oils/fats/grease. During 2021 the site was not able to take sufficient samples due to inadequate rainfall. Resulting from the virtual compliance assessment in November 2011, the Licensee received a non-compliance in relation to failure to sample and monitor surface water in accordance with the licence during 2011. Immediate action was taken to sample the surface waters and collect for analysis. The Licensee is currently awaiting the results of analysis from the external laboratory on the samples taken on December 6<sup>th</sup> and 7<sup>th</sup>, 2021. The Agency was advised of the sampling via Licensee Return Ref LR063622.

A summary of the surface water discharge quarterly monitoring results is presented in the tables below, for the reporting period 2019 and 2020. Results for 2021 are not yet available. See Site Visit Report SV22084 and associated non-compliance.

On an annual basis, since 2019 (Ref. Site Visit Report SV17109), the Licensee has taken a sample of surface waters for analysis of heavy metal content. A summary of the annual monitoring results is presented in the tables below for the reporting period 2019 and 2020. Results from 2021 are not yet available (samples taken 6<sup>th</sup> and 7<sup>th</sup> Dec). Required reporting to the Agency of results of annual heavy metal analysis to surface water samples was undertaken via Licensee Return Ref LR045522 (2019 analysis) and Licensee Return Ref LR036312 (2020 analysis).

**Table 3.1: Summary of Surface Water Monitoring for SW1 and SW2**

Aeropsace-Waterford (EI04)			Honeywell		
TelLabs			2019		
SW1 & SW2 Quarterly Analysis					
Date	Parameter	Unit of Measurement	Method of Analysis APHA/USEPA	Licence Limit	Reported Levels
<b>SW1</b>					
Annualised average result					
	COD	mg/Litre	Dichromate Reflux	600mg/L	6.333 COD
	Oils,Fats,Grease	mg/Litre	Soxhlet Extraction	80mg/L	3.667 FOG
03/07/2019	COD	mg/Litre	Dichromate Reflux	600mg/L	7
03/07/2019	Oils,Fats,Grease	mg/Litre	Soxhlet Extraction	80mg/L	2
23/09/2019	COD	mg/Litre	Dichromate Reflux	600mg/L	7
23/09/2019	Oils,Fats,Grease	mg/Litre	Soxhlet Extraction	80mg/L	2
28/11/2019	COD	mg/Litre	Dichromate Reflux	600mg/L	5
28/11/2019	Oils,Fats,Grease	mg/Litre	Soxhlet Extraction	80mg/L	7
Date	Parameter	Unit of Measurement	Method of Analysis APHA/USEPA	Licence Limit	Reported Levels
<b>SW2</b>					
Annualised average result					
21/02/2019	COD	mg/Litre	Dichromate Reflux	600mg/L	37
21/02/2019	Oils,Fats,Grease	mg/Litre	Soxhlet Extraction	80mg/L	<2
03/07/2019	COD	mg/Litre	Dichromate Reflux	600mg/L	2
03/07/2019	Oils,Fats,Grease	mg/Litre	Soxhlet Extraction	80mg/L	2
23/09/2019	COD	mg/Litre	Dichromate Reflux	600mg/L	11
23/09/2019	Oils,Fats,Grease	mg/Litre	Soxhlet Extraction	80mg/L	2
28/11/2019	COD	mg/Litre	Dichromate Reflux	600mg/L	5
28/11/2019	Oils,Fats,Grease	mg/Litre	Soxhlet Extraction	80mg/L	11
COD 2019 Avg - SW1& SW2					10.571
OFG 2019 Avg - SW1& SW2					4.333
Est. 1107mm rainfall in 2019 = 0.996 x 35,000m (site area) = 34,860 site area				0.41	Kg COD
AER & PTR ENTRY					
Est annual rainfall site area		1107 35000 38745	0.17		Kg OFG

Aerospace-Waterford (EI04)						Honeywell
TelLabs SW1 & SW2 Quarterly Analysis		2020				
Date	Parameter	Unit of Measurement	Method of Analysis APHA/USEPA	Licence Limit	Reported Levels	
<b>SW1</b>						
25/03/2020	COD	mg/Litre	Dichromate Reflux	600mg/L	4	Annualised average result
25/03/2020	Oils,Fats,Grease	mg/Litre	Soxhlet Extraction	80mg/L	2	7.000 COD
						2.000 FOG
	COD	mg/Litre	Dichromate Reflux	600mg/L		
	Oils,Fats,Grease	mg/Litre	Soxhlet Extraction	80mg/L		not enough flow in drain to take sample in 02 and 03
	COD	mg/Litre	Dichromate Reflux	600mg/L		
	Oils,Fats,Grease	mg/Litre	Soxhlet Extraction	80mg/L		
24/11/2020	COD	mg/Litre	Dichromate Reflux	600mg/L	10	
24/11/2020	Oils,Fats,Grease	mg/Litre	Soxhlet Extraction	80mg/L	2	
<b>SW2</b>						
						Annualised average result
25/03/2020	COD	mg/Litre	Dichromate Reflux	600mg/L	4	7.000 COD
25/03/2020	Oils,Fats,Grease	mg/Litre	Soxhlet Extraction	80mg/L	2	2.000 FOG
	COD	mg/Litre	Dichromate Reflux	600mg/L		no flow
	Oils,Fats,Grease	mg/Litre	Soxhlet Extraction	80mg/L		no flow
	COD	mg/Litre	Dichromate Reflux	600mg/L		no flow
	Oils,Fats,Grease	mg/Litre	Soxhlet Extraction	80mg/L		no flow
24/11/2020	COD	mg/Litre	Dichromate Reflux	600mg/L	10	
24/11/2020	Oils,Fats,Grease	mg/Litre	Soxhlet Extraction	80mg/L	2	
COD Avg - SW1 & SW2					7.000	7.000
OFG Avg - SW1 & SW2					2.000	
Est. 1150.3mm rainfall in 2020 = 0.996 x 35,000m (site area) = 34,860 site area				0.28	Kg COD	AER & PRT ENTRY
Est annual rainfall site area				1.1503	35000	40260.5
				0.08	Kg OFG	
					Kg formula	
					average result x annual rainfall over site/1,000,000	



**ANALYSIS OF AQUEOUS SAMPLE.**

Date Sampled: 23/09/2019  
 Date Received: 26/09/2019  
 Date Analysis Commenced: 26/09/2019  
 Our Ref: WS-48395 & 19-20064  
 Certificate No: L/19/1509


	Sample ID	SW1	SW2
<b>Determinand</b>	<b>Lab ID</b>	<b>160057</b>	<b>160058</b>
Aluminium (ug/l) #	n/a	<10	<10
Hexavalent Chromium (ug/l)	++	<7.0	<7.0
Iron#	**	<0.05	<0.05
Lead#	**	<0.20	<0.20
Nickel #	**	<0.10	<0.10
Total Chromium	n/a	<0.05	<0.05
Zinc#	**	0.03	0.07

Results expressed as mg/l (ppm)  
 unless stated otherwise

\*\* = INAB Accredited Tests    ++ = Subcontracted Tests    n/a = Non-INAB Accredited Tests

The above results relate only to the sample tested  
 This report should not be regenerated except in full and with the consent of T.E. Laboratories Ltd.

# Analysis of metals are performed on the filtered sample

			
<b>ANALYSIS OF AQUEOUS SAMPLE.</b>			
Date Sampled: 24/11/2020			
Date Received: 26/11/2020			
Date Analysis Commenced: 26/11/2020			
Our Ref: 7248 & 20-24405			
Certificate No: L/20/1724			
	<b>Sample ID</b>	<b>SW1</b>	<b>SW2</b>
<b>Determinand</b>	<b>Lab ID</b>	<b>9762</b>	<b>9765</b>
Aluminium (ug/l)	n/a	<10	<10
Hexavalent Chromium (ug/l)	++	<7.0	<7.0
Iron#	**	0.06	<0.05
Lead #	**	<0.20	<0.20
Nickel #	**	<0.10	<0.10
Total Chromium	n/a	<0.05	<0.05
Zinc#	**	0.11	0.21
Results expressed as mg/l (ppm) unless stated otherwise			
** = INAB Accredited Tests    ++ = Subcontracted Tests    n/a = Non-INAB Accredited Tests			
The above results relate only to the sample tested			
This report should not be regenerated except in full and with the consent of T.E. Laboratories Ltd.			
# Analysis of metals are performed on the filtered sample			

**3.2 Inspections and Measures to reduce Metal Dust generation and Transfer to External Yard and Roof Areas**

A maintenance log for shop floor cleaning activities is completed to ensure minimum dust generation and transfer to external areas. This involves the Utility Operator carrying out routine floor washings and cleanings within the machining workshop to reduce the transfer of metal dust that may have reached the floor to external yard and roof areas. Waste bins are also emptied on a daily basis, with swarf collection drums being transferred to the waste compound with the lids of the drums on them to prevent loss during transport. A weekly walk of external areas by HSE checks for compliance in control of metal dust generation and transfer to external areas.

### **3.3 Waste Management**

Honeywell Aerospace-Waterford maintains full details and records of all waste arising on site in accordance with Condition 8 of the IPPC Licence.

A full record, which shall be open to inspection by authorised persons of the Agency at all times, shall be kept by the licensee on matters relating to the waste management operations and practices at this site.

The records shall as a minimum contain details of the following:

- The names of the agent and transporter of the waste;
- The name of the persons responsible for the ultimate disposal/recovery of the waste;
- The ultimate destination of the waste;
- Written confirmation of the acceptance and disposal/recovery of any hazardous waste consignments sent off-site;
- The results of any analysis required under schedule C.4.3 Waste Monitoring;
- The tonnage and EWC code for the waste materials sent off site for disposal/recovery;
- Details of any rejected consignments; and
- The tonnage and EWC code for the waste materials recovered/disposed of onsite.

A summary of this waste management record is submitted to the Agency as part of the AER for this site. An additional requirement for the site is to ensure that all hazardous waste is disposed of only at Honeywell approved waste sites.

#### **3.2.1 Hazardous Waste**

The main sources of hazardous waste generated on-site include waste coolants, waste oil, waste chemical solutions used in the processing of titanium and stainless steel parts, fluorescent tubes and WEEE.

Honeywell Aerospace-Waterford retains copies of all waste disposal licences/permits issued to its waste disposal contractors. Honeywell Aerospace-Waterford audits all waste contractors to ensure high standards are maintained. Appropriate waste documentation is used to track hazardous waste taken off-site for recycling or disposal.

A summary of the waste quantities generated at the Honeywell Aerospace-Waterford facility is provided in the AER every year. All hazardous wastes generated are stored in designated and segregated hazardous waste storage areas onsite.

ENVA Recycling processes the majority of the hazardous waste on behalf of Honeywell Aerospace-Waterford. A small amount of waste is dealt with by Cork Metal, Geocycle, KMK Metals, Irish Lamps (WEEE) and Stericlyle/SRCL (medical waste).

#### **3.2.2 Non-Hazardous Waste**

Honeywell Aerospace-Waterford has implemented a comprehensive waste management system for monitoring, recording, disposal and recovery of non-hazardous wastes.

The main non-hazardous wastes generated at Honeywell Aerospace-Waterford include the following: general refuse, canteen waste, waste pallets, paper, cardboard, and scrap metal.

General waste is transferred to Greenstar's recycling facility in Waterford for further segregation for recyclables and the remaining waste is disposed of to landfill.

Food waste is segregated and collected in compost bins for collection by Greenstar.

Cardboard is collected for recycling by Greenstar Recycling.

Mixed steel waste from the metal waste skip is sent for recycling via Greenstar.

Metal swarf and filings from machining processes is collected in steel barrels and sent for recycling via Cork Metal.

Ceramin clay waste is segregated into FIBC bags and collected for treatment by Geocycle.

Honeywell Aerospace-Waterford does not have a high turnover of pallets; therefore old and broken pallets are included with all other waste timber and are recycled on behalf of Greenstar Co. Waterford.

A summary of the annual waste quantities generated at the Honeywell Aerospace-Waterford facility are provided in the AER.

### **3.3 Environmental Incidents involving groundwater or surface water potential impacts**

On Feb 1<sup>st</sup> 2019, the site had a minor spillage of diesel to ground from a stand-in diesel generator located in the car parking area next to the sites' Compressor house. An immediate response was undertaken by the sites' emergency response team, shutting off the diesel generator, collection of any spilt diesel contained within the generators' housing to an IBC for future waste treatment and the mopping up of any diesel to ground by laying absorbent socks and spill matting. The diesel generator supplier was also able to attend site within 30 minutes of the incident and complete repairs to a split pipe in the diesel injector pump. The relevant authorities including the EPA were advised of the event. (Ref Incident INCI015964)

Samples from nearby surface water drains were tested for pH, oil, fats and greases and TPH, with and without characterisation. Results confirm TPH below <10ug/l (ppb) and below the limit of detection for TPH with characterisation. The Agency was advised on the outcome of the results via a response to incident INCI015964.

The site engaged the services of Biologix to perform an initial assessment of the ground / soil. The resulting report identified some concern regarding TPH presence in the made ground (hard tarmac). As per Company protocol, the site engaged with Honeywells' Environmental Remediation Services and using their expertise it was agreed to undertake a Phase II Environmental Site Assessment (ESA) using Ramboll UK as the competent party to conduct the ESA.

During 2020 several visits were undertaken by Ramboll to set up the site & obtain relevant soil & water samples for analysis. Some works were delayed during 2020 due to COVID restrictions. The Licensee has received the final draft of this ESA from Ramboll in July 2021. The Agency was updated on the incident and subsequent ESA via Licensee Return LR059910.

Based on the recommendations in the Ramboll ESA report, the site has re-engaged Ramboll to assess the lateral extent of the impact to soil & shallow groundwater & to estimate the volume of impacted soil should the site need to proceed to remediation works. This work was undertaken in September and October 2021, with a final report pending.

### 3.4 Environmental Complaints

There were no logged environmental complaints made to Honeywell Aerospace-Waterford. A complaints process is in place and a complaints book available in the reception area of Honeywell Aerospace-Waterford.

### 3.5 Solvent Management Plan

Honeywell Aerospace-Waterford has implemented a comprehensive solvent management system for monitoring and recording of solvent consumption as required in IPPC licence. This has been reviewed on an annual basis as part of the AER submission.

#### 2020 Fugitive Solvent Emission Data

The information below summarises the quantity of solvents used this year, the percentage of fugitive solvent emissions (% of total quantity used) and whether the percentage complied with the targets set in the EU Regulations.

**Table 11 Summary of Fugitive Solvent Emissions**

Quantity of Solvents Used (Kg)	% Fugitive Solvent Emissions	Compliant
2335 Kg, of which 0.608 Kg (coating activities)	0.03%	Yes

**Table 3.5 Summary of Solvent Management in 2020**

Material Name	Solvent Name	CAS Number	Container Size:	Solvent Concentration (%)	2020 Solvent Quantity (Litre)
642 solvent spec ps642	Toluene, Methyl Ethyl Keton	108-88-3, 78-93-3	5 ltr	100	250.00
ACETONE RSA 001	Acetone	67-64-1	1 ltr	100	90.00
ACID, HYDROCHLORIC, 18%			25 ltr	100	
ACID, HYDROFLURIC, 70% (220ltr)	Hydrogen chloride	7647-01-0	220 ltr	100	22.00
ACID, HYDROFLURIC, 70% (25ltr)	Hydrogen chloride	7647-01-0	25 ltr	100	
ACID, NITRIC, 70%	Nitric Acid	7697-37-2	25 ltr	100	840.00
ACID, SULFURIC, 95-96%	Sulfuric Acid	7664-93-9	25 ltr	100	
ACTICIDE OX			5 ltr	100	
AQUADAG 18%	Ammonium Hydroxide	1336-21-6	25 kg	100	
BLASER DEFOAMER 29108-02-001			1 LTR	100	48.00
BONDERITE L-FG ADAF C (Replaces Aquadag)			25 kg	100	4.00
BRULIN 1990 GD	Sodium Tripolyphosphate	7758-29-4	25 ltr	100	
BRULIN 815 GD-NF	Sodium Tripolyphosphate	7758-29-4	25 ltr	100	90.00
CAUSTIC SODA LIQUOR 30%	Sodium Hydroxide Solution	1310-73-2	25 ltr	100	
CAUSTIC SODA LIQUOR 47%	Sodium Hydroxide Solution	1310-73-2	25 kg	100	450.00
CLEANING SOLUTION 1011378			0.5 LTR	100	
DAG 554/20	1,3,5-Tris-hexahydro-1,3,5-triazine, Ammonium hydroxide in water	4719-04-4, 1336-21-6	25 kg	100	6.40
DAG LUB 6003	Ammonium Hydroxide	1336-21-6	25 kg	100	
DRY FILM LUBRICANT IP9136	2-Methoxy-1-Methylethyl Acetate, Butanol-norm, Butyl Acetate-norm, Cyclohexanone, Epoxy Resin, Formaldehyde, ISO-Butanol, Isophorone, MelamineP/W Formaldehyde Butylated, Methanol, Xylene	108-65-6, 71-36-3, 123-86-4, 108-94-1, 25068-38-6, 50-00-0, 78-83-1, 78-59-1, 68002-25-5, 67-56-1, 1330-20-7	1 ltr	100	

ECOLUBE642 SPEC PW474	Toluene, Methyl Ethyl Keton, Molybdenum Disulfide, Antimony Trioxide, Lead Phosphite, Methyl Isobutyl Ketone, Ethanol, Pine Oil, N-Butanol, Xylene, Isopropanol, Ethyl Benzene	108-88-3, 78-93-3, 1317-33-5, 1309-64-4, 12141-20-7, 108-10-1, 64-17-5, 8002-09-3, 71-36-3, 1330-20-7, 67-63-0, 100-41-4	3.79 ltr	100	
GLASS COATING FB - 634	Isothiazolinone derivates	55965-84-9	25 kg	100	
GLASS COATING FG 14.1			100 ltr	5	1.00
HYDRATED LIME	Calcium Hydroxide, Magnesium Hydroxide, Calcium Oxide, Magnesium Oxide, Calcium Carbonate, Crystalline Silica	1305-62-0, 1309-42-8, 130578-8, 1909-48-4, 1317-65-3, 14808-60-7	25 kg	100	
INK IC2BK024			0.825 ltr	100	
IONOPLUS IME-MH DIELECTRIC DIE-HELD			208 ltr	100	
LUBIZOL CONTRAM CB1 960392.9			1 LTR	41%	
MAKE UP MC270BK	Nitrocellulose, Metyyl Ethly Ketone, Propan-2-OL, Ethanol, Methanol, Isopropyl Acetate, Chromium III Compound	9004-70-0, 78-93-3, 67-63-0, 64-17-5, 67-56-1, 108-21-4	0.825 ltr	100	
MAKEUP MC2BK024	2-Butanone, Ethanol	78-93-3, 64-17-5	1.2 ltr	100	24.00
METHYL ETHYL KETONE	Methyl Ethyl Keton	78-93-3	2.5 ltr	100	
MOBILE DTE 960052.9			25 ltr	3	6.00
MOBILE VECTRA 4 960106.9			50 LTR	1	4.00
MOLYCOTE 3400A	Toluene, Butanone	203-625-9, 201-159-0	-	100	
MOLYCOTE LR13	N-Butyl acetate, Butan-1-OL	123-86-4, 71-36-3	-	100	
MOTEREX COOL-X & BODOXIN SET-COOLANT PACK			25 LTR	100	225.00
ORION TISAB 111	Ammonium Chloride, Ammonium Acetate, Cresol Red, Tran-1,2-Diamond Cyclohexane Tetraaetic Acid	12125-02-9, 631-61-8, 62625-29-0, 482-54-2	475 ml	100	0.32
PAC LIQUOR, 12%			25 ltr	12	

RENOCLEAN SMC	Oxazolidine derivative, Propylene glycol butyl ether, Monoethanolamine, Sodium Sulphonate, Ethoxylate, Pyrithione, sodium salt, d-Limonene	5989-27-5	25ltr	100	
RESERVIOR IR270BK	Butanone, Ethanol, Isopropyl Acetate, Methanol, Propan-2-OL, Solvent Black Dye	78-93-3, 64-17-5, 108-21-4, 67-56-1, 67-63-0	1.20 ltr	100	
STANDARD THINNERS PLUS			5 ltr	100	153.60
THINNERS LR725(IP3170)			5 ltr	100	
THINNERS LR13			-	100	
TRIM C270 SYNTHETIC	2-amino-2methyl-1propanol, 2-aminoethanol, Triethanolamine, 1,3,5-hexahydro-2-4-6 -triazine	124-68-5, 141-43-5, 102-71-61, 3960-05-02	205 ltr	27	
TRIM WHAMEX MACHINE CLEANER			25	100	
TROWAL AMC LIQUID	Amides, coco, N,N-bis, 2,2-liminodiethanol		1 kg	20	15.00
WD 40 SPRAY	Aliphatic Hydrocarbon, Petroleum Base Oil, Carbon Dioxide, Surfactant	64742-47-8, 64742-58-1, 64742-56-9, 64742-65-0, 64742-47-8, 124-38-9,	450 ml	98	26.46
WL200	Butanone	78-93-3	1 ltr	100	9.00
ZL-37 PENETRANT + COC	Distillates, Hydrotreated Light, Alky Aryl Phosphate, C12-C13 Aliphatic Alcohol	64742-47-8, 29761-21-5, 67762-41-8	25 ltr	85	42.50
ZYGLO ZR-10C	Alcohol Ethoxylate			50	12.50
ISOPROPLY ALCOHOL (2- Propanol 99.8 %)	Isopropyl alcohol	67-63-0	2.5	100	10.00
ZYGLO ZP 4B FORM A	Pentaerythritol, Calcium Phosphate	00115-77-5, 12167-74-7	5	100	5.00
<b>TOTAL Volume of Solvent Usage</b>					<b>2334.78</b>
<b>Solvent volume usage with coating process</b>					<b>608</b>

### **3.6 Bund Testing**

Inspection of all bunds and pits at Aerospace-Waterford was carried out by Chemstore engineer in Oct 2020, with all bunds passing testing. Chemstore was commissioned to carry out Hydrostatic Leak testing of the following: -

- Broach Pits x 4
- Press Pits x 2
- Cleanline Bund
- Waste Water Treatment Plant Bund
- Oil Compound Bund
- Centrifuge Bund
- New Waste Water Treatment Plant Bund

The next scheduled bund integrity testing will be conducted in 2023 as required by the IPPC licence.

### **3.7 Pipeline Integrity Testing**

In line with Condition 6.6. of the sites' IPPC licence, the integrity of the stormwater drainage system on site was undertaken in Sept 2019, with some failures noted. Repair works to address failures were completed throughout 2020. Testing post repairs has indicated that the system is in a suitable condition to comply with drain integrity licensing requirements. Notification of result of integrity testing was provided to the Agency via Licensee Return LR056713.

### **3.8 Environmental Liabilities / Residuals Management**

Honeywell Aerospace-Waterford commissioned Gerard Kelly of Environet to produce an Environmental Liabilities Risk Assessment and Closure, Restoration & Aftercare Management Plan for the facility.

See Appendix 4

Since 12<sup>th</sup> December 2018 the Licensee has in place an environmental impairment liability insurance policy with Chubb, an insurer authorised to provide insurance products in Ireland and have a financial security rating of at least A as defined by Standard and Poor's

See Appendix 4

### **3.9 Fire-water Retention Study**

Risk of fire has been identified in both the Environmental Accident Prevention Policy and the Emergency Response Manual. The PM Group carried out a Fire-Water Retention Study for Honeywell Aerospace-Waterford in 2004. The study was reviewed and updated in March 2011.

See Appendix 3.

### **3.10 Site Spill Impact Assessment**

A Site Spill Impact Assessment report has been completed.

See Appendix 5.

#### 4. GROUND AND SURFACE WATER ACTION PLAN

Honeywell Aerospace-Waterford has put the following action plan in place for 2021.

**Table 4.1 Summary of ground and surface water protective actions**

Action No	Findings	Action Plan Description	Responsible Person	Target Date
1	Site Procedure Revision	Review all relevant Honeywell site procedures at least every 3 years	HSE leader	Ongoing in accordance with Honeywell requirements
2	IPPC Licence - Monitoring of Surface Water Emission	Complete daily visual inspections & weekly inspection for visual, odour and pH checks at SW1 & SW2 drainage systems. Note drain wetness or dryness, flow or no flow. Check pH of any flow in drains (minimum requirement weekly pH check in line with licence condition)	Greenstar Operator	Ongoing: daily & weekly
3	IPPC Licence - Monitoring of Surface Water Emission	Take quarterly samples from identified Storm Water drains for COD and FOG analysis	HSE leader	Ongoing: quarterly
4	IPPC Licence - Monitoring of Surface Water Emission	Annually take samples from identified Storm Water drains and analyse for heavy metal content. Communicate results to EPA.	HSE Leader	Ongoing: annually
5	Chemical Storage Area Inspections	Carry out weekly visual inspection of all chemical storage areas including: chemical store, hazardous waste store, old and new waste water treatment plants, general outside yard, sprinkler and pump house.	HSE leader	Ongoing Inspection: weekly
6	IPPC Licence Requirements	Complete next scheduled bund integrity testing will be conducted in 2023 as required by the IPPC licence.	HSE leader	End 2023
7	IPPC Licence Requirements	Complete 3-yearly rotational drain integrity testing and carry out necessary repairs in a timely manner.	HSE leader	Ongoing annually
8	Training Requirements	Conduct routine training on chemical spill and container management for all relevant employees	HSE leader	As per site HSEF training plan

9	Document Management	Review Environmental Liabilities Risk Assessment and update if necessary with site environmental liability insurance	HSE leader	ongoing
10	Document Management	Review Fire-Water Retention Study as necessary	HSE leader	As needed
11	IPPC Licence - Condition 11.7	Forward monthly effluent discharge to sewer analysis results to Waterford City Council (Copy EPA) on a monthly basis	HSE leader	Ongoing: monthly
12	EPA recommendation	Complete maintenance log for shop floor cleaning activities to ensure minimum dust generation and transfer to external areas	Alec Crosse, Site Leader & J Breen Operations Leader	Ongoing daily
13	Bund Inspection	Routine external area check by HSE checks chemical storage area bunding is adequate. Bunds in chemical storage areas are routinely checked every year during the occasion of site chemical inventory.	Site HSE Leader	Ongoing weekly
14	Diesel Spill Incident	Re-engage the services of Ramboll to assess the lateral extent of the impact to soil and shallow groundwater and estimate the volume of impacted soil should the site need to proceed to remediation works.	Site Leader & Site HSE Leader	End 2021

