

AN APPLICATION TO VARY ENVIRONMENTAL PERMIT NUMBER EPR/DP3131NM FOR THE NON-HAZARDOUS WASTE TREATMENT INSTALLATION OPERATED BY JOHNSONS AGGREGATES AND RECYCLING LIMITED AT SAXON BRICKWORKS, WHITTLESEY, CAMBRIDGESHIRE

NUISANCE AND AMENITY ENVIRONMENTAL RISK ASSESSMENT (ERA)

Report reference: JAG/WH/AW/5713/01/ERA July 2024

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1. Introduction

- 1.1 MJCA is commissioned by Johnsons Aggregates and Recycling Limited (JARL) to prepare an application to vary Environmental Permit number EPR/DP3131NM (the permit) for the non-hazardous waste treatment facility operated by JARL at Saxon Brickworks, Whittlesey, Cambridgeshire, PE7 1PJ (the site). The permit was first issued on 14 January 2022 and has not been varied to date following issue.
- 1.2 The permit currently authorises the receipt, storage and processing of up to 250,000 tonnes per annum (tpa) of Incinerator Bottom Ash (IBA) to produce Incinerator Bottom Ash Aggregate (IBAA) including recovery of ferrous and non-ferrous metals from the IBA; the receipt and storage and screening of up to 50,000 tpa of construction and demolition (C&D) wastes and blending/mixing of the treated C&D waste with IBAA and aggregate. The risks associated with these activities were addressed in the risk assessments and management plans provided previously to the Environment Agency which are listed in Table S1.2 of the permit as Operating Techniques.
- 1.3 The proposed changes to the permit which are the subject of this variation application are listed below. The changes in relation to tonnages of waste are summarised in the table below the list.
 - i. An increase in the total quantity of IBA waste accepted at the site from 250,000 tpa to 460,000 tpa (Table S2.2).
 - ii. An increase in the total quantity of C&D waste accepted at the site from 50,000 tpa to 154,000 tpa (Table S2.3).
 - iii. An increase in the daily treatment capacity for the treatment of IBA from 1,000 tonnes per day (tpd) to 2,000 tpd (Installation Activity reference A1).
 - iv. An increase in the maximum quantity of IBA stored at any one time prior to treatment from 52,000 tonnes to 75,000 tonnes and an increase in the maximum stockpile height for IBA from 4.6m to 6.7m to accommodate the increase in storage capacity (Directly Associated Activity (DAA) reference AR2).
 - v. An increase in the maximum quantity of IBAA stored at any one time following treatment from 38,304 tonnes to 50,000 tonnes and an increase in the maximum



- stockpile height for IBAA from 4.6m to 6.7m to accommodate the increase in storage capacity (DAA reference AR3).
- vi. An increase in the maximum quantity of ferrous and non-ferrous metals stored at any one time following treatment from 1,786 tonnes to 2,500 tonnes (DAA reference AR3). This will include storage of recovered metal in containers in a new building (building 3). See item xii for further details of building 3.
- vii. An increase in the maximum quantity of C&D waste stored at any one time from 7,373 tonnes to 15,000 tonnes and an increase in the maximum stockpile height for C&D waste from 4.6m to 5.5m to accommodate the increase in storage capacity (Waste operation reference AR8).
- viii. Inclusion in Table S2.3 of additional waste types for receipt, storage and processing under activity AR8 (C&D waste processing). An updated version of Table S2.3 is provided with this application. All of the additional waste types are waste types which are included in Appendix C of the WRAP/Environment Agency Quality Protocol (QP) for Aggregates from inert waste as wastes considered to be inert waste for the purpose of the QP.
- ix. Addition of crushing of C&D waste at the site (Waste operation reference AR8).
- x. Addition of crushing of IBA/IBAA on a campaign basis (Installation Activity reference A1).
- xi. Inclusion in Table S2.2 of four additional IBA derived waste types to the list of wastes authorised to be accepted at the site. Although IBAA currently is produced, processed and stored at the site, and ferrous and non-ferrous metals are recovered from IBA and IBAA at the site, the permit currently does not authorise these waste types to be accepted at/imported to the site from other processing facilities. The four waste types that it is proposed will be accepted at the site will be consistent generally with the waste types already handled and stored at the site hence the controls for the management of these waste types already are implemented and demonstrated to be effective. The purpose of importing these waste types to the site is to undertake further processing of the wastes to enhance metal recovery. The processing will be undertaken using the



plant and processes already installed and authorised to be undertaken at the site.

- xii. A change in the Environmental Permit boundary to add a small additional area measuring approximately 0.35 hectares to the permitted area. The revised Environmental Permit boundary is shown in green on Figure ERA 2. The additional area of land to be included in the permit boundary is in the south western part of the site adjacent to and west of building 2 and includes an additional building (building 3). As a result of the boundary change the total site area will increase by less than 7.5%.
- xiii. An increase in the site operational hours to include 24 hour operation in building 1. These changes are supported by a noise impact assessment and a noise management plan.

Activity	Permit Table	Current	Proposed
IBA acceptance	S2.2	250,000 tpa	460,000 tpa
C&D waste acceptance	S2.3	50,000 tpa	154,000 tpa
Daily treatment capacity IBA	S1.1 A1	1,000 tpd	2,000 tpd
IBA stored prior to treatment	S1.1 AR2	52,000 t	75,000 t
Treated IBAA storage	S1.1 AR3	38,304 t	50,000 t
Ferrous/non-ferrous waste storage	S1.1 AR3	1,786 t	2,500 t
C&D waste storage	S1.1 AR8	7,373 t	15,000 t

Summary of the proposed changes in tonnages

- 1.4 This document comprises a nuisance and amenity environmental risk assessment (ERA) prepared generally in accordance with Environment Agency guidance entitled 'Risk assessments for your environmental permit' published on GOV.UK1. A risk screening matrix is provided in Table ERA 1 and the assessment is presented in Table ERA 2. The assessment is relevant to the proposed changes. The ERA considers potential receptors and pathways for impacts based on the understanding of the environment surrounding the site.
- 1.5 An Air Quality Environmental Impact Assessment (AQEIA)² was prepared in support of the original permit application. The AQEIA has been updated to assess the potential impacts on air quality from the proposed changes at the site. A copy of the

² NoiseAir Acoustics and Air Quality. Air Quality Environmental Impact Assessment. Proposed Industrial Development Saxon Brickworks, Whittlesey. Report Ref: P4648-R1-V2. 17 June 2021. Version 2.



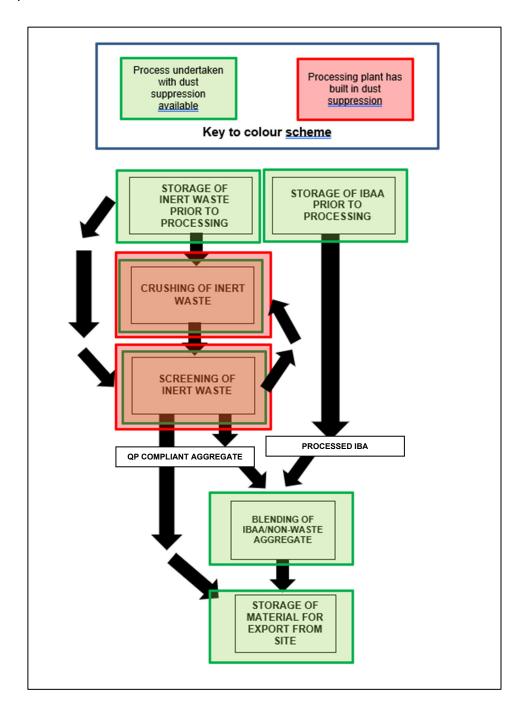
Available at https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit. Published 1 February 2016. Last updated 31 November 2023. Last accessed 5 March 2024.

updated AQEIA is provided with the application to vary the permit. The AQEIA concludes that "..the overall significance of fugitive dust effects as a result of the operation of the facility were predicted to be not significant" and "The results of the assessment indicated the predicted odour effect significance was negligible at all receptors. Following review of the relevant factors, overall odour effects associated with the operation of the facility were predicted to be not significant". An Environment Agency approved Dust Management Plan (DMP) is currently implemented at the site. The DMP identifies the operations at the site which may have the potential to have an impact on air quality as a result of emissions of particulate matter, presents the details of the operational controls which are implemented to minimise emissions and describes the monitoring which will be carried out to confirm the effectiveness of the management controls. The DMP has been prepared with reference to the AQEIA and has been updated to reflect the proposed changes the subject of this variation application.

- As shown on Figure ERA1, the site is centred approximately at National Grid Reference (NGR) TL 25464 97168 to the west of Whittlesey and approximately 4km south east of Peterborough. The site is located at Saxon Works which was formerly a clay quarry and associated brickworks. The site is located within the excavation associated with the former works. The site setting is shown on Figure ERA2 and full details of the receptors in the vicinity of the site are presented in the AQEIA and in the DMP. As shown on Figure ERA 2, the only residential receptors within 250m of the site boundary are the properties at Holly Blue Gardens approximately 180m north north west of the site to the north of Peterborough Road (A605) and a small row of houses on the A605 approximately 250m north west of the site where the site access road meets the A605.
- 1.7 The aggregate recycling activity will include crushing and screening of waste. The waste types which will be processed in the aggregate recycling activity, which are considered to be inert waste for the purposes of the Aggregates QP, will be stored and processed in the open air (ie not within a building) on the existing impermeable surface at the site. The blending of IBAA and non-waste aggregate will be undertaken in the open air (ie not within a building) on the impermeable surface at the site. In order to minimise double handling of material, the location of the blending activity, which will be undertaken using mechanical mobile plant, will be dependent on the location of the IBAA that is being blended with the aggregate and will not be



carried out at a specific fixed location within the site. A process flow diagram illustrating the steps in the aggregate recycling activity and the blending activity, including the fugitive emissions control measures is presented below. Further details of the layout of the site and details of the dust and particulate matter control measures are presented in the DMP.



1.8 In order to increase resource efficiency JARL are proposing to undertake further processing comprising crushing of IBA/IBAA at the site to enhance ferrous and non-

ferrous metal recovery rates. Further details of this activity are presented in the Best Available Techniques (BAT) assessment provided with the application to vary the permit. The BAT assessment concludes that based on the risk posed by the activity and the implemented control measures, the crushing activity does not need to be undertaken within an enclosed building. Details of the control measures and monitoring (to confirm the effectiveness of the control measures) are presented in the Dust Management Plan.

- 1.9 The selection of potential receptors has been determined based on information presented on the Defra MAGIC website, Google Earth and information presented in the AQEIA and the approved DMP for the site. The risk assessment takes into consideration receptors within 500m of the site with the exception of statutorily designated nature conservation sites for which a distance of up to 2km has been specified.
- 1.10 Based on information on the DEFRA MAGIC website there are no National Parks, Areas of Outstanding Natural Beauty, Marine Conservation Zones, Ramsar Sites, National Nature Reserves or Local Nature Reserves within 2km of the site. Nene Washes, which comprises a Site of Special Scientific Interest, a Special Area of Conservation and a Special Protection Area, is located approximately 1km north of the site. The site is not located in a groundwater Source Protection Zone (SPZ). The site is not located in an Air Quality Management Area (AQMA). As shown on Figure ERA 2 King's Dike is located approximately 300m south of the site boundary and a railway line runs from west to east approximately 150m south of the site boundary. The King's Dike and the railway line are elevated considerably above the ground level of the site which, as described earlier in paragraph 1.6, is located in the bottom of a former clay pit.
- **1.11** Based on information on the DEFRA MAGIC website there are no World Heritage Sites, Scheduled Monuments or listed buildings within 500m of the site.
- 1.12 Based on information on the DEFRA MAGIC website there are areas of Deciduous Woodland Priority habitats approximately 50m north of the site and approximately 100m south of the site. The locations of the Deciduous Woodland correspond generally with the green areas shown on Figure ERA2. There are no areas of Ancient Woodland within 2km of the site.



- 1.13 A wind rose for Wittering Airfield for the years 2000-2019 is shown on Figure ERA2. Wittering Airfield is located approximately 20km north west of the site. Based on the wind rose the prevailing wind direction is from the west or WSW and therefore areas to the east or ENE of the site are generally down prevailing wind direction of the site. As shown on Figure ERA 2 the closest receptors down prevailing wind of the site to the east or ENE of the site are approximately 350m from the site boundary. The wind rose data is consistent generally with the wind rose data presented in the DMP which show the prevailing wind direction from the WSW.
- 1.14 An updated DMP³ has been prepared to support the application to vary the permit. The DMP provides further details of the receptors in the vicinity of the site. Since the permitted operations commenced, there have been no dust issues raised by the Environment Agency.
- 1.15 A Noise Impact Assessment (NIA)⁴ has been prepared to the support the application to vary the permit. It is concluded in the NIA that there will be no significant or unacceptable adverse impact at noise sensitive premises in the vicinity of the site.
- 1.16 As the site is located in Flood Zone 3 a Flood Risk Assessment (FRA) was prepared to support the planning application for the current JARL facility. The existing approved FRA notes that the site is in Flood Zone 3 due to topography, and that it is essentially a defended site due to the surrounding topography and embankments preventing and flood waters associated with flood zone 3 from entering the site. This conclusion was derived from the Flood Map for Planning and from flood maps within the 2018 Peterborough Level 1 SFRA. The current Flood Map for Planning shows the same flood zone outline for the site and the 2018 SFRA is still the most recent SFRA for the area. HSP Consulting have undertaken a FRA review in support of a Section 73 application for proposed changes that are generally consistent with those the subject of this application to vary the environmental permit. The conclusion of the FRA review states:

"In summary the flood risk posed to the site from fluvial, pluvial, or other means is considered to remain unchanged from the previous application and associated flood risk. Similarly, the flood risk that

⁴ LFAcoustics Consulting Engineers. Noise Assessment. Saxon Pit s73 Noise V1.0 210624. June 2024.



³ DMP Version 15

the site poses to external areas (i.e. surface water run-off) also remains unchanged. As such, the conclusions of the previous FRA are considered to still be relevant, and the proposals are not considered to warrant further design or review."



Conclusion

1.17 The ERA presented in Table ERA 2 that has been completed to support the application to vary the permit demonstrates that the proposed changes with the implemented controls have a low or very low risk of adverse impact on amenity or the surrounding environment including sites of heritage or nature conservation interest.



TABLES

Table ERA 1 Risk screening matrix (waste treatment activity)

								FUG	SITIVE	EMIS	SIONS	3	
RISK TYPE	ODO	CHECHIE		NOISE AND VIBRATION		PARTICULATE MATTER			LITTER		BIRDS, VERMIN AND INSECTS		MUD ON THE ROAD
GENERIC HAZARDS GENERIC RECEPTORS ¹	Waste storage and processing	Waste delivery	Waste delivery	Waste storage and processing	Waste delivery	Waste storage and processing	Site surfaces	Access routes	Waste delivery	Waste storage and processing	Waste delivery	Waste storage	Vehicle Movements
DOMESTIC DWELLING	х	х	х	х	Х	Х	Х	Х					
SCHOOLS AND COLLEGES													
HOSPITALS													
OFFICES/COMMERCIAL PREMISES	X	X	X	X	X	X	X	X					
INDUSTRIAL PREMISES	X	X	X	X	X	X	X	X					
PUBLIC FOOTPATH OR BRIDLEWAY	X	X	X	X	X	X	X	X					
HIGHWAYS OR ROADS					Х	X	X	X					X
PARKS AND PUBLIC OPEN SPACES	х	Х			Х	X	X	X					
FARMLAND WITH LIVESTOCK													
FARMLAND ARABLE													
PRIORITY HABITAT			X	Х	X	X	X	X					
NATURE SITE OF LOCAL IMPORTANCE (e.g. LNR, CWS)													

								FUC	SITIVE	EMIS	SIONS	6	
RISK TYPE	ODOUR		NOISE AND VIBRATION		PARTICULATE MATTER			LITTER		BIRDS, VERMIN AND INSECTS		MUD ON THE ROAD	
GENERIC HAZARDS GENERIC RECEPTORS ¹	Waste storage and handling	Waste delivery	Waste delivery	Waste storage and handling	Waste delivery	Waste storage and handling	Restored surfaces	Access routes	Waste delivery	Waste storage and handling	Waste delivery	Waste deposition	Vehicle Movements
SITE OF SPECIAL SCIENTIFIC INTEREST (within 2km)					х	х	х	х					
SPECIAL AREA OF CONSERVATION (within 2km)					х	х	х	Х					
SPECIAL PROTECTION AREA OR OTHER RELEVANT SSSI (within 2km)					х	х	х	Х					
LISTED BUILDINGS (within 500m)													
SCHEDULED MONUMENT (within 500m)													
AIRPORT													
RAILWAY					Х	Х	Х	Х					
SURFACE WATER					Х	X	X	Х					

X = generic receptor type present and generic hazard considered as part of this assessment set out in Table ERA 2

¹ All generic receptors within 500m have been identified unless an alternative distance has been identified.

Table ERA 2 – Assessment of nuisance and amenity risks associated with the proposed changes

What do you do t	hat can harm ai be harmed?	nd what could	4	Assessing the risl	k	Managing the risk		
Hazard	Receptor (see Table ESSD 2)	Pathway	Probability of exposure	Consequence	What is the overall risk?	Risk management	What is the residual risk?	
What has the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard get to the receptor?	How likely is this contact?	What is the harm that can be caused?	What is the risk? The balance of probability and consequence	What measures will you take to reduce the risk? If it occurs – who is responsible for what?	What is the risk that still remains?	
Odour						-		
Odorous wastes	Local human population	Air	Low	Nuisance from odour	Low	An approved Odour Management Plan (OMP) is implemented at the site. There are no proposals to import new waste types to the site which haven't previously been handled at the site. The AQEIA prepared in support of the application for the current permit included an odour risk assessment (ORA). The ORA concluded that the predicted odour effect significance was negligible at all receptor locations hence odour emission impacts were considered not significant. The AQEIA has been updated to reflect the proposed changes the subject of this permit variation application including a revised ORA. The conclusions of the revised ORA are consistent with the conclusions of the original ORA. The proposed changes the subject of the application to vary the permit will not increase significantly the risk associated with odour emissions compared with the currently permitted activities.	Negligible	

What do you do t	hat can harm ai be harmed?	nd what could	,	Assessing the risk	<	Managing the risk		
Hazard	Receptor (see Table ESSD 2)	Pathway	Probability of exposure	Consequence	What is the overall risk?	Risk management	What is the residual risk?	
What has the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard get to the receptor?	How likely is this contact?	What is the harm that can be caused?	What is the risk? The balance of probability and consequence	What measures will you take to reduce the risk? If it occurs – who is responsible for what?	What is the risk that still remains?	
						The conclusions of the ORAs are backed up by site observations since the permitted operations commenced, during which there have been no odour incidents at the site and there have been no odour complaints attributable to the JARL site.		
Noise					1	,		
Blending, crushing, screening, mobile plant and vehicles	Local human population	Air	Medium	Nuisance from noise	Low	The potential impacts of noise from the proposed changes including crushing and screening of waste have been assessed and a Noise Impact Assessment (NIA) has been provided with the application. In the summary of the NIA it is stated that "Noise levels during the daytime periods would not increase as a result of the additional throughput, with a reduction in noise levels anticipated due to the additional mitigation and control measures to be implemented". Details of the additional mitigation and control measures are presented in the NIA. In the summary of the NIA it is stated that "Overnight with Buildings 1 and 2 operational, noise levels would not increase above those accepted for the current application, which considers the operation of Building 2. This demonstrates that the proposed night-time operation would not result in a potential for adverse noise impacts at the neighbouring properties."	Low	



What do you do t	hat can harm ai be harmed?	nd what could	1	Assessing the risk	(Managing the risk	
Hazard	Receptor (see Table ESSD 2)	Pathway	Probability of exposure	Consequence	What is the overall risk?	Risk management	What is the residual risk?
What has the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard get to the receptor?	How likely is this contact?	What is the harm that can be caused?	What is the risk? The balance of probability and consequence	What measures will you take to reduce the risk? If it occurs – who is responsible for what?	What is the risk that still remains?
Vibration	-		-				
Crushing, screening, mobile plant and vehicles	Local human population	Ground	Low	Nuisance from vibration	Low	The proposed changes the subject of the application to vary the permit will not increase significantly the risk associated with nuisance from vibration compared with the currently permitted activities.	Very low
Fugitive emissions							
Particulates from access routes, waste delivery, waste storage and waste treatment	Local human population / properties / farmland arable / public highway / water bodies / sensitive habitat	Air	Low	Deposition of particulate matter	Medium to low	The currently implemented and approved Dust Management Plan (DMP) (V9) has been updated (now V15) to provide details of the control measures associated with the proposed changes. The DMP describes the operations at the site which may have the potential to have an impact on air quality as a result of emissions of particulate matter, describes the operational controls which are implemented to minimise emissions and describes the monitoring which is carried out to confirm the effectiveness of the management controls. The AQEIA prepared in support of the application for the current permit included a dust impact risk	Low
						assessment (DRA). The DRA concluded that the risk of an impact from dust was low or negligible at receptor locations and the magnitude of dust effects was predicted to be negligible at all receptor locations. The AQEIA has been updated to reflect	



What do you do t	hat can harm ar be harmed?	nd what could	,	Assessing the risk	(Managing the risk	
Hazard	Receptor (see Table ESSD 2)	Pathway	Probability of exposure	Consequence	What is the overall risk?	Risk management	What is the residual risk?
What has the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard get to the receptor?	How likely is this contact?	What is the harm that can be caused?	What is the risk? The balance of probability and consequence	What measures will you take to reduce the risk? If it occurs – who is responsible for what?	What is the risk that still remains?
						the proposed changes the subject of this permit variation application including a revised DRA. The conclusions of the revised DRA are consistent with the conclusions of the original DRA. The proposed changes the subject of the application to vary the permit will not increase.	
						application to vary the permit will not increase significantly the risk associated with dust emissions compared with the currently permitted activities.	
The wastes that will be accepted have a very low potential to generate litter or to attract birds, vermin or insects.	Local human population / properties / farmland arable / public highway / water bodies / sensitive habitat	Air	Negligible	Nuisance associated with litter	Negligible	The proposed new waste types are consistent with those specified at Appendix C of the Aggregates from inert waste Quality Protocol hence have a low potential for generating litter or attracting birds, vermin or insects. Acceptance procedures are in place which minimise the risk of unsuitable and wastes which may generate litter or be attractive to vermin being accepted.	Negligible
Mud and debris deposited on the public highway	Public highway	Vehicle movements	Low	Mud on the public highway	Low	The controls in place to minimise the deposition of mud and debris on the public highway are presented in the DMP for the site. The proposed changes the subject of the application to vary the permit will not increase significantly the risk associated with the deposition of mud and debris on the public highway compared with the currently permitted activities.	Low



What do you do t	hat can harm and be harmed?	nd what could	,	Assessing the risl	(Managing the risk		
Hazard	Receptor (see Table ESSD 2)	Pathway	Probability of exposure	Consequence	What is the overall risk?	Risk management	What is the residual risk?	
What has the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard get to the receptor?	How likely is this contact?	What is the harm that can be caused?	What is the risk? The balance of probability and consequence	What measures will you take to reduce the risk? If it occurs – who is responsible for what?	What is the risk that still remains?	
Contamination from wastes accepted	Groundwater/ surface water	Infiltration/ run- off	Medium	Contamination of groundwater/ surface water	Low	Consistent with the requirement of the current permit, IBA and IBAA will continue to be stored on an impermeable surface with sealed drainage. The proposed new waste types are consistent with those specified at Appendix C of the Aggregates from inert waste Quality Protocol hence have a low potential for leaching of substances which may contaminate groundwater. Waste acceptance procedures are implemented at the site that will minimise the risk of unsuitable and contaminated wastes being accepted. All waste types handled at the site are stored on an impermeable surface with sealed drainage. The blending of IBAA and nonwaste aggregate will be undertaken on an impermeable surface with sealed drainage. The proposed changes the subject of the application to vary the permit will not increase significantly the risk associated with the contamination of groundwater/surface water compared with the currently permitted activities.	Low	

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_	What do you do that can harm and what could be harmed?			Assessing the risk	(Managing the risk		
Hazard	Receptor (see Table ESSD 2)	Pathway	Probability of exposure	Consequence	What is the overall risk?	Risk management	What is the residual risk?	
What has the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard get to the receptor?	How likely is this contact?	What is the harm that can be caused?	What is the risk? The balance of probability and consequence	What measures will you take to reduce the risk? If it occurs – who is responsible for what?	What is the risk that still remains?	
Waste stored and treated on site	Local human population gaining unauthorised access to the waste operation	Direct physical contact	Low	Bodily injury	Low	The proposed new waste types accepted at the site should not cause harm to human health by virtue of its composition. Security measures comprising the use of fencing, safety signs and regular inspections are implemented to minimise the potential for unauthorised entry to the site. The main site gates are locked outside normal working hours.	Very low	
Vehicle movements on site	Local human population gaining unauthorised access to the site	Direct physical contact	Low	Bodily injury	Medium	Security measures are implemented to minimise the potential for unauthorised entry to the site. Vehicles employ suitable non-tonal reversing alarms.	Low	
Accidental release of fuel	Water resources	Infiltration to ground	Low	Contamination of water resources	Medium	Company operational, maintenance, inspection and accident management procedures are in place. Spillage kits are available and site personnel are trained in their use. The site surfacing comprises an impermeable surface with sealed drainage.	Low	

What do you do t	hat can harm ar be harmed?	nd what could		Assessing the risk	(Managing the risk	
Hazard	Receptor (see Table ESSD 2)	Pathway	Probability of exposure	Consequence	What is the overall risk?	Risk management	What is the residual risk?
What has the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard get to the receptor?	How likely is this contact?	What is the harm that can be caused?	What is the risk? The balance of probability and consequence	What measures will you take to reduce the risk? If it occurs – who is responsible for what?	What is the risk that still remains?
Flooding	The generic receptors identified in the DMP and in the ERA	Flood waters	Low	Flooding associated with the generic receptors identified in the DMP and the ERA	Low	Based on the information reviewed on the Environment Agency flood map for planning tool, the site is located within Flood Zone 3 which is land that has a high probability of flooding. A Flood Risk Assessment (FRA) was prepared to support the planning application for the current JARL facility. The existing approved FRA notes that the site is in Flood Zone 3 due to topography, and that it is essentially a defended site due to the surrounding topography and embankments preventing flood waters associated with Flood Zone 3 from entering the site. HSP Consulting have undertaken a FRA review in support of a Section 73 planning application for proposed changes that are generally consistent with those the subject of this application to vary the environmental permit. The conclusion of the FRA review states: "In summary the flood risk posed to the site from fluvial, pluvial, or other means is considered to remain unchanged from the previous application and associated flood risk. Similarly, the flood risk that the site poses to external areas (i.e. surface water run-off) also remains unchanged. As such, the conclusions of the previous FRA are considered to still be relevant, and the proposals are not considered to warrant further design or review".	Low
Fire	Atmospheric emissions	Air	Very low	Nuisance from smoke and odour	Very low	As the wastes accepted at the site are non-flammable and non-combustible the risk of	Negligible



What do you do t	hat can harm ar be harmed?	nd what could		Assessing the risk	(Managing the risk	
Hazard	Receptor (see Table ESSD 2)	Pathway	Probability of exposure	Consequence	What is the overall risk?	Risk management	What is the residual risk?
What has the potential to cause harm?	What is at risk? What do I wish to protect?	How can the hazard get to the receptor?	How likely is this contact?	What is the harm that can be caused?	What is the risk? The balance of probability and consequence	What measures will you take to reduce the risk? If it occurs – who is responsible for what?	What is the risk that still remains?
				Contamination of water resources		occurrence of fires is negligible. Measures are in place to store chemicals and oils securely and with suitable infrastructure and operational procedures which will minimise the risk of these being a source of fire.	
Waste operations may cause harm to and deterioration of nature conservation sites.	Protected sites - European sites and SSSIs	Air	Negligible	Harm to protected site through contamination	Negligible	The proposed changes will not increase significantly the risk to protected sites (Nene Washes SSSI, SAC & SPA) within 2km of the site compared with the currently permitted operations. Measures are in place to minimise the risk of unacceptable impacts from the waste activities on the surrounding environment which will be protective also of the protected sites.	Negligible
Waste operations may cause harm to and deterioration of nature conservation sites.	Protected habitat (deciduous woodland)	Air	Low	Harm to protected site through toxic contamination, nutrient enrichment, smothering, disturbance, predation etc.	Very Low	The proposed changes will not increase significantly the risk to protected habitats within 500m of the site compared with the currently permitted operations. Measures are in place to minimise the risk of unacceptable impacts from the waste activities on the surrounding environment which will be protective also of the and protected habitat.	Negligible
Waste operations may cause harm to and deterioration of heritage conservation sites.	Designated heritage sites – Scheduled Monuments and Listed Buildings	Direct physical contact	Very Low	Movement of vehicles and the deposition of debris	Very Low	There are no heritage conservation sites within 500m of the site.	Negligible



FIGURES

