Appendix 1 – General risk assessment schedule

Data and information				Judgement				Action (by permitting)	
Receptor	**Source**	**Harm**	**Pathway**	**Probability of exposure**	**Consequence**	**Magnitude of risk**	**Justification for magnitude**	**Risk management**	**Residual risk**
What is at risk? What do I wish to protect?	What is the agent or process with potential to cause harm?	What are the harmful consequences if things go wrong?	How might the receptor come into contact with the source?	How likely is this contact?	How severe will the consequences be if this occurs?	What is the overall magnitude of the risk?	On what did I base my judgement?	How can I best manage the risk to reduce the magnitude?	What is the magnitude of the risk after management? (This residual risk will be controlled by Compliance Assessment).
Local human population and local environment – see receptors listed in Table 1.	Releases of particulate matter (dusts) and micro-organisms (bioaerosols).	Harm to human health - respiratory irritation and illness.	Air transport then inhalation.	Medium	Low	**Low**	Permitted waste types are inert and have a low potential to produce bioaerosols. The activities may produce dust from movement of vehicles and tipping operations especially in dry and also windy weather. The site is in relatively close proximity to residential properties along Bow Lane to the east of the excavation area (closest property 50m east). Other residential and commercial properties/sites are situated to the north and east of the proposed processing plant and access road area – properties along Puckrup Lane (200m northeast) and in Puckrup (300m north) and the golf course and hotel at Hilton Puckrup Hall, Tewkesbury (50m north). The prevailing wind direction is from the southwest and therefore there is potential for the residential properties, particularly the closest properties along Bow Lane, to be impacted upon by dust generated from the permitted activities unless appropriate mitigation and management measures are implemented. The potential for impact from dust will be minimised and managed in accordance with the mitigation measures set out in the Dust Emissions Management Plan (Appendix J of Environmental Permit application).	Activities will be managed and operated in accordance with a management system that includes measures to prevent and reduce risk of dust being produced and where it is produced from leaving the site boundaries. Implementation of Site Operation Procedures to minimise releases in accordance with Waste Acceptance Criteria (Appendix Giii of Environmental Permit application), the Dust Emissions Management Plan (Appendix J of Environmental Permit application) and the Environmental Management System (Appendix B of Environmental Permit application).	Low

Appendix 1 – General risk assessment schedule

Data and information				Judgement				Action (by permitting)	
Receptor	**Source**	**Harm**	**Pathway**	**Probability of exposure**	**Consequence**	**Magnitude of risk**	**Justification for magnitude**	**Risk management**	**Residual risk**
What is at risk? What do I wish to protect?	What is the agent or process with potential to cause harm?	What are the harmful consequences if things go wrong?	How might the receptor come into contact with the source?	How likely is this contact?	How severe will the consequences be if this occurs?	What is the overall magnitude of the risk?	On what did I base my judgement?	How can I best manage the risk to reduce the magnitude?	What is the magnitude of the risk after management? (This residual risk will be controlled by Compliance Assessment).
Local human population and local environment – see receptors listed in Table 1.	Releases of particulate matter (dust).	Nuisance - dust on cars, clothing etc.	Air transport then deposition.	Medium	Low	**Low**	Permitted waste types are inert. The activities may produce dust from movement of vehicles and tipping operations especially in dry and also windy weather. The site is in relatively close proximity to residential properties along Bow Lane to the east of the excavation area (closest property 50m east). Other residential and commercial properties/sites are situated to the north and east of the proposed processing plant and access road area – properties along Puckrup Lane (200m northeast) and in Puckrup (300m north) and the golf course and hotel at Hilton Puckrup Hall, Tewkesbury (50m north). The prevailing wind direction is from the southwest and therefore there is potential for the residential properties, particularly the closest properties along Bow Lane, to be impacted upon by dust generated from the permitted activities unless appropriate mitigation and management measures are implemented. The potential for impact from dust will be minimised and managed in accordance with the mitigation measures set out in the Dust Emissions Management Plan (Appendix J of Environmental Permit application).	Activities will be managed and operated in accordance with a management system that includes measures to prevent and reduce risk of dust being produced and where it is produced from leaving the site boundaries. Implementation of Site Operation Procedures to minimise releases in accordance with Waste Acceptance Criteria (Appendix Giii of Environmental Permit application), the Dust Emissions Management Plan (Appendix J of Environmental Permit application) and the Environmental Management System (Appendix B of Environmental Permit application).	Low

Appendix 1 – General risk assessment schedule

Data and information				Judgement				Action (by permitting)	
Receptor	**Source**	**Harm**	**Pathway**	**Probability of exposure**	**Consequence**	**Magnitude of risk**	**Justification for magnitude**	**Risk management**	**Residual risk**
What is at risk? What do I wish to protect?	What is the agent or process with potential to cause harm?	What are the harmful consequences if things go wrong?	How might the receptor come into contact with the source?	How likely is this contact?	How severe will the consequences be if this occurs?	What is the overall magnitude of the risk?	On what did I base my judgement?	How can I best manage the risk to reduce the magnitude?	What is the magnitude of the risk after management? (This residual risk will be controlled by Compliance Assessment).
Local human population and local environment – see receptors listed in Table 1.	Litter.	Nuisance, loss of amenity and harm to animal health.	Air transport then deposition	Low	Low	**Low**	Local residents often sensitive to litter, however permitted waste types are inert and have low litter potential. The site is in relatively close proximity to residential properties along Bow Lane to the east of the excavation area (closest property 50m east). Other residential and commercial properties/sites are situated to the north and east of the proposed processing plant and access road area – properties along Puckrup Lane (200m northeast) and in Puckrup (300m north) and the golf course and hotel at Hilton Puckrup Hall, Tewkesbury (50m north). The prevailing wind direction is from the southwest) and therefore there is potential for the residential properties, particularly the closest properties along Bow Lane, to be impacted upon by litter generated from the permitted activities unless appropriate mitigation and management measures are implemented.	Implementation of Site Operation Procedures to minimise litter in accordance with Waste Acceptance Criteria (Appendix Giii of Environmental Permit application) and the Environmental Management System (Appendix B of Environmental Permit application).	Very Low
Local human population and local environment – see receptors listed in Table 1.	Mud and waste on road.	Nuisance, loss of amenity, road traffic accidents.	Tracked on tyres of vehicles entering and leaving the site and from loads which are not properly contained.	Medium	Low	**Low**	Permitted waste types are typically ones that will produce mud especially during wet weather.	Activities will be managed and operated in accordance with a management system that minimises the risk of mud and waste being tracked out onto the highway. This includes wheel-cleaning/washing facilities where appropriate and necessary. All vehicles will have adequate containment such as sheeting to prevent waste spillage. Implementation of Site Operation procedures in	Very Low

Appendix 1 – General risk assessment schedule

Data and information				Judgement				Action (by permitting)	
Receptor	**Source**	**Harm**	**Pathway**	**Probability of exposure**	**Consequence**	**Magnitude of risk**	**Justification for magnitude**	**Risk management**	**Residual risk**
What is at risk? What do I wish to protect?	What is the agent or process with potential to cause harm?	What are the harmful consequences if things go wrong?	How might the receptor come into contact with the source?	How likely is this contact?	How severe will the consequences be if this occurs?	What is the overall magnitude of the risk?	On what did I base my judgement?	How can I best manage the risk to reduce the magnitude?	What is the magnitude of the risk after management? (This residual risk will be controlled by Compliance Assessment).
								accordance with Waste Acceptance Criteria and Procedures (Appendix Giii of Environmental Permit application) and Environmental Management System (Appendix B of Environmental Permit application).	
Local human population and local environment – see receptors listed in Table 1.	Odour.	Nuisance, loss of amenity.	Air transport then inhalation.	Very Low	Very Low	**Very Low**	Local residents often sensitive to odour, however permitted waste types are inert and have low odour potential. The site is in relatively close proximity to residential properties along Bow Lane to the east of the excavation area (closest property 50m east). Other residential and commercial properties/sites are situated to the north and east of the proposed processing plant and access road area – properties along Puckrup Lane (200m northeast) and in Puckrup (300m north) and the golf course and hotel at Hilton Puckrup Hall, Tewkesbury (50m north). The prevailing wind direction is from the southwest) and therefore there is potential for the residential properties, particularly the closest properties along Bow Lane, to be impacted upon by odour from the permitted activities unless appropriate mitigation and management measures are implemented.	Activities will be managed and operated in accordance with a management system that minimises the potential for non-permitted wastes being deposited at site and deals with rogue loads if they do occur. Implementation of Site Operation procedures in accordance with Waste Acceptance Criteria and Procedures (see Appendix Giii of Environmental Permit application) and Environmental Management System (see Appendix B of Environmental Permit application).	Very Low

Appendix 1 – General risk assessment schedule

Data and information				Judgement				Action (by permitting)	
Receptor	**Source**	**Harm**	**Pathway**	**Probability of exposure**	**Consequence**	**Magnitude of risk**	**Justification for magnitude**	**Risk management**	**Residual risk**
What is at risk? What do I wish to protect?	What is the agent or process with potential to cause harm?	What are the harmful consequences if things go wrong?	How might the receptor come into contact with the source?	How likely is this contact?	How severe will the consequences be if this occurs?	What is the overall magnitude of the risk?	On what did I base my judgement?	How can I best manage the risk to reduce the magnitude?	What is the magnitude of the risk after management? (This residual risk will be controlled by Compliance Assessment).
Local human population and local environment – see receptors listed in Table 1.	Noise and vibration.	Nuisance, loss of amenity, loss of sleep.	Noise through the air and vibration through the ground.	Low	Low	**Low**	Local residents often sensitive to noise and vibration but there will be low potential for exposure. The site is in relatively close proximity to residential properties along Bow Lane to the east of the excavation area (closest property 50m east). Other residential and commercial properties/sites are situated to the north and east of the proposed processing plant and access road area – properties along Puckrup Lane (200m northeast) and in Puckrup (300m north) and the golf course and hotel at Hilton Puckrup Hall, Tewkesbury (50m north). The prevailing wind direction is from the southwest) and therefore there is potential for the residential properties, particularly the closest properties along Bow Lane, to be impacted upon by noise from the permitted activities unless appropriate mitigation and management measures are implemented. Hours / duration of working limited by extant Planning Permissions.	Implementation of Site Operation procedures to reduce noise and vibration in accordance with Noise Impact Assessment and Management Plan (Appendix K of Environmental Permit application) and Environmental Management System (Appendix B of Environmental Permit application).	Low
Local human population and local environment – see receptors listed in Table 1.	Scavenging animals and scavenging birds.	Harm to human health from waste carried off site and faeces. Nuisance and loss of amenity.	Air transport and over land.	Low	Very Low	**Low**	Permitted waste types are inert and are unlikely to attract scavenging animals and birds but may become nesting / breeding sites.	Implementation of Site Operation procedures in accordance with Waste Acceptance Criteria and Procedures (see Appendix Giii of Environmental Permit application) and Environmental Management System (see Appendix B of Environmental Permit application).	Very Low

Appendix 1 – General risk assessment schedule

Data and information				Judgement				Action (by permitting)	
Receptor	**Source**	**Harm**	**Pathway**	**Probability of exposure**	**Consequence**	**Magnitude of risk**	**Justification for magnitude**	**Risk management**	**Residual risk**
What is at risk? What do I wish to protect?	What is the agent or process with potential to cause harm?	What are the harmful consequences if things go wrong?	How might the receptor come into contact with the source?	How likely is this contact?	How severe will the consequences be if this occurs?	What is the overall magnitude of the risk?	On what did I base my judgement?	How can I best manage the risk to reduce the magnitude?	What is the magnitude of the risk after management? (This residual risk will be controlled by Compliance Assessment).
Local human population and local environment – see receptors listed in Table 1.	Pests (e.g. flies).	Harm to human health, nuisance, loss of amenity.	Air transport and over land.	Low	Very Low	**Low**	Permitted waste types are inert and are unlikely to attract pests.	Implementation of Site Operation procedures in accordance with Waste Acceptance Criteria and Procedures (Appendix Giii of Environmental Permit application) and Environmental Management System (Appendix B of Environmental Permit application).	Very Low
Local human population and local environment – see receptors listed in Table 1.	Flooding of site.	If waste contaminated water is washed off site it may contaminate building, gardens, watercourses and natural habitats.	Flood waters.	Medium	Low	**Low**	Permitted waste types are inert and have very low contamination potential. The majority of the Phases 1 to 9 excavation area is located is situated within fluvial flood risk Flood Zone 1 (less than 0.1% annual chance of flooding from rivers) and Flood Zone 2 (between 0.1% and 1% annual chance of flooding from rivers). Only the outer extremities of the Phases 1 to 9 area are located in Flood Zone 3 (annual chance river flooding is greater than 1%). Flood defences exist on the banks of the River Severn and the Mythe Brook. Flexible Working Areas A and B are situated within Flood Zone 3. Part of the site situated in Gloucestershire, to the east of Ripple Brook, is also located within fluvial flood risk Flood Zone 3. The majority of the EPR Permit Application area is situated within a low (between 0.1% and 1% annual chance of flooding from surface water) or very low (less than 0.1% annual chance of flooding from surface water) pluvial flood risk area. The EPR Permit Application area is not at risk of pluvial flooding.	Implementation of Site Operation procedures in accordance with Waste Acceptance Criteria and Procedures (Appendix Giii of Environmental Permit application) and Environmental Management System (Appendix B of Environmental Permit application).	Very Low

Appendix 1 – General risk assessment schedule

Data and information				Judgement				Action (by permitting)	
Receptor	**Source**	**Harm**	**Pathway**	**Probability of exposure**	**Consequence**	**Magnitude of risk**	**Justification for magnitude**	**Risk management**	**Residual risk**
What is at risk? What do I wish to protect?	What is the agent or process with potential to cause harm?	What are the harmful consequences if things go wrong?	How might the receptor come into contact with the source?	How likely is this contact?	How severe will the consequences be if this occurs?	What is the overall magnitude of the risk?	On what did I base my judgement?	How can I best manage the risk to reduce the magnitude?	What is the magnitude of the risk after management? (This residual risk will be controlled by Compliance Assessment).
Local human population and / or livestock after gaining unauthorised access to the waste operation.	All on-site hazards, wastes, machinery and vehicles.	Bodily injury.	Direct physical contact.	Very Low	High	**Medium**	High standards of Health and Safety management.	Implementation of Site Operation and Site Equipment and Maintenance Procedure (EMS Procedure 14), Group Emergency Response Plans, Environmental Contingency Plan (EMS Procedure 15), in accordance with Environmental Management System (Appendix B of Environmental Permit application).	Very Low
Local human population and local environment – see receptors listed in Table 1.	Arson and / or vandalism causing the release of polluting materials to air (smoke or fumes), water or land.	Respiratory irritation, illness and nuisance to local population. Injury to staff, fire fighters or arsonists/vandals. Pollution of water or land.	Air transport of smoke. Spillages and contaminated firewater by direct runoff from site and *via* surface water drains and ditches.	Very Low	Medium	**Low**	High standards of site security and management. Permitted waste types are inert.	Implementation of Site Operation, Waste Acceptance Criteria (Appendix Giii of Environmental Permit application), Site Equipment and Maintenance Procedure (EMS Procedure 14), Group Emergency Response Plans, Environmental Contingency Plan (EMS Procedure 15), Procedure for Vehicle Oil/Fuel Leaks (EMS Procedure 4), Spillages of Fuel and Chemicals & other Hazardous or Environmentally Damaging Substances (Emergency Response Procedure 2) in accordance with Environmental Management System (Appendix B of Environmental Permit application).	Very Low
Local human population and local environment – see receptors listed in Table 1.	Accidental fire causing the release of polluting materials to air (smoke or fumes), water or land.	Respiratory irritation, illness and nuisance to local population. Injury to staff or fire fighters. Pollution of water or land.	As above.	Very Low	Medium	**Low**	High standards of site management. Permitted waste types are inert.	Implementation of Site Operation, Waste Acceptance Criteria (Appendix Giii of Environmental Permit application), Site Equipment and Maintenance Procedure (EMS Procedure 14), Group Emergency Response Plans, Environmental Contingency Plan (EMS Procedure 15),	

Appendix 1 – General risk assessment schedule

Data and information				Judgement				Action (by permitting)	
Receptor	**Source**	**Harm**	**Pathway**	**Probability of exposure**	**Consequence**	**Magnitude of risk**	**Justification for magnitude**	**Risk management**	**Residual risk**
What is at risk? What do I wish to protect?	What is the agent or process with potential to cause harm?	What are the harmful consequences if things go wrong?	How might the receptor come into contact with the source?	How likely is this contact?	How severe will the consequences be if this occurs?	What is the overall magnitude of the risk?	On what did I base my judgement?	How can I best manage the risk to reduce the magnitude?	What is the magnitude of the risk after management? (This residual risk will be controlled by Compliance Assessment).
								Procedure for Vehicle Oil/Fuel Leaks (EMS Procedure 4), Spillages of Fuel and Chemicals & other Hazardous or Environmentally Damaging Substances (Emergency Response Procedure 2) in accordance with Environmental Management System (Appendix B of Environmental Permit application). Permitted activities do not include the burning of waste.	
All surface waters close to and downstream of site – see receptors listed in Table 1.	Spillage of liquids including oil, leachate from waste, contaminated rainwater runoff from waste e.g. containing suspended solids, contaminated groundwater. Surface water/groundwater level changes/ derogation. Rainwater pumped from the excavation, potentially turbid by surface water runoff from the waste, into surface water management system – discharge of	Acute effects: fish and invertebrate kill. If waste contaminated water is washed off site it may contaminate watercourses and natural habitats leading to chronic effects and deterioration of water quality.	Direct runoff from site across ground surface, *via* surface water drains, ditches *etc.* Surface waters, leachate from infiltration through the waste. Indirect pathway *via* soil/groundwater.	Low	Low	**Low**	High standards of site management. Permitted waste types are inert and have very low contamination potential. The Quantitative Hydrogeological Risk Assessment completed as part of the Hydrogeological Risk Assessment (Appendix Giv of Environmental Permit application) demonstrates that there will be no detrimental impact on the local hydrogeological or hydrological environment resulting from the activity.	Implementation of Site Operation, Waste Acceptance Criteria (Appendix Giii of Environmental Permit application), Site Equipment and Maintenance Procedure (EMS Procedure 14), Group Emergency Response Plans, Environmental Contingency Plan (EMS Procedure 15), Procedure for Vehicle Oil/Fuel Leaks (EMS Procedure 4), Spillages of Fuel and Chemicals & other Hazardous or Environmentally Damaging Substances (Emergency Response Procedure 2) in accordance with Environmental Management System (Appendix B of Environmental Permit application). A side slope Artificial Geological Barrier will be constructed on a phased basis in excavation area Phases 1 to 9 in order to provide protection to soil, groundwater	Very Low

Appendix 1 – General risk assessment schedule

Data and information				Judgement				Action (by permitting)	
Receptor	**Source**	**Harm**	**Pathway**	**Probability of exposure**	**Consequence**	**Magnitude of risk**	**Justification for magnitude**	**Risk management**	**Residual risk**
What is at risk? What do I wish to protect?	What is the agent or process with potential to cause harm?	What are the harmful consequences if things go wrong?	How might the receptor come into contact with the source?	How likely is this contact?	How severe will the consequences be if this occurs?	What is the overall magnitude of the risk?	On what did I base my judgement?	How can I best manage the risk to reduce the magnitude?	What is the magnitude of the risk after management? (This residual risk will be controlled by Compliance Assessment).
	clarified runoff *via* infiltration basin.							and surface water at least equivalent to that resulting from an attenuation barrier/liner with a minimum thickness of 1.0m and a maximum permeability of 1 x 10^{-7}m/sec. The Triassic Branscombe Mudstone Formation of the Mercia Mudstone Group underlying the site forms an adequate natural basal geological barrier. During site operations, excavation area Phases 1 to 9 will have a clay cut-off installed to separate the excavation area from the surrounding sand and gravel aquifer. Groundwater interception ditches will be installed around the perimeter of the excavations to route intercepted groundwater in the eastern perimeter to the western perimeter *via* the north and south, as groundwater would flow pre-development. Up-gradient and down-gradient monitoring of groundwater levels to ensure groundwater interception ditches are performing as designed *i.e.* no groundwater truncation. During site operations, direct rainfall and surface water runoff within the excavation area Phases 1 to 9 will be managed in accordance with the approved Bow Farm Surface Water Drainage Scheme report (GWP Report	

Appendix 1 – General risk assessment schedule

Data and information				Judgement				Action (by permitting)	
Receptor	**Source**	**Harm**	**Pathway**	**Probability of exposure**	**Consequence**	**Magnitude of risk**	**Justification for magnitude**	**Risk management**	**Residual risk**
What is at risk? What do I wish to protect?	What is the agent or process with potential to cause harm?	What are the harmful consequences if things go wrong?	How might the receptor come into contact with the source?	How likely is this contact?	How severe will the consequences be if this occurs?	What is the overall magnitude of the risk?	On what did I base my judgement?	How can I best manage the risk to reduce the magnitude?	What is the magnitude of the risk after management? (This residual risk will be controlled by Compliance Assessment).
								No. 240707), prepared separately to discharge Condition 20 of Planning Permission Number 19/000048/CM (Worcestershire County Council). The Surface Water Drainage Scheme report is included as an Appendix of the Hydrogeological Risk Assessment (Appendix Giv of this Environmental Permit application). There will be no direct discharge of water associated with the Environmental Permit activities from the site into any local surface water receptors. See also Environmental Setting and Site Design (Appendix Gii of Environmental Permit application) and Hydrogeological Risk Assessment (Appendix Giv of Environmental Permit application).	
Abstraction from watercourse downstream of site – see receptors listed in Table 1.	Spillage of liquids including oil, leachate from waste, contaminated rainwater runoff from waste e.g. containing suspended solids. Rainwater pumped from the excavation, potentially turbid by surface water runoff from the	Deterioration of water quality. Acute effects, closure of abstraction intakes.	Direct runoff from site across ground surface, *via* surface water drains, ditches etc. Surface waters, leachate from infiltration through the waste. Indirect pathway *via* soil/groundwater.	Very Low	Very Low	**Very Low**	High standards of site management. Permitted waste types are inert and have very low contamination potential. River Severn abstraction reach *c.* 400m away from the excavation area Phases 1 to 9 where imported inert fill will be placed. No other downstream abstractions that will be impacted on by permitted activities. The Quantitative Hydrogeological Risk Assessment completed as part of the Hydrogeological Risk Assessment (Appendix Giv of	Implementation of Site Operation, Waste Acceptance Criteria (Appendix Giii of Environmental Permit application), Site Equipment and Maintenance Procedure (EMS Procedure 14), Group Emergency Response Plans, Environmental Contingency Plan (EMS Procedure 15), Procedure for Vehicle Oil/Fuel Leaks (EMS Procedure 4), Spillages of Fuel and Chemicals & other Hazardous or Environmentally Damaging Substances (Emergency	Very Low

Appendix 1 – General risk assessment schedule

Data and information				Judgement				Action (by permitting)	
Receptor	**Source**	**Harm**	**Pathway**	**Probability of exposure**	**Consequence**	**Magnitude of risk**	**Justification for magnitude**	**Risk management**	**Residual risk**
What is at risk? What do I wish to protect?	What is the agent or process with potential to cause harm?	What are the harmful consequences if things go wrong?	How might the receptor come into contact with the source?	How likely is this contact?	How severe will the consequences be if this occurs?	What is the overall magnitude of the risk?	On what did I base my judgement?	How can I best manage the risk to reduce the magnitude?	What is the magnitude of the risk after management? (This residual risk will be controlled by Compliance Assessment).
	waste, into surface water management system – discharge of clarified runoff *via* infiltration basin.		Then abstraction.				Environmental Permit application) demonstrates that there will be no detrimental impact on the local hydrogeological or hydrological environment resulting from the activity.	Response Procedure 2) in accordance with Environmental Management System (Appendix B of Environmental Permit application). A side slope Artificial Geological Barrier will be constructed on a phased basis in excavation area Phases 1 to 9 in order to provide protection to soil, groundwater and surface water at least equivalent to that resulting from an attenuation barrier/liner with a minimum thickness of 1.0m and a maximum permeability of 1 x 10^{-7}m/sec. The Triassic Branscombe Mudstone Formation of the Mercia Mudstone Group underlying the site forms an adequate natural basal geological barrier. During site operations, excavation area Phases 1 to 9 will have a clay cut-off installed to separate the excavation area from the surrounding sand and gravel aquifer. Groundwater interception ditches will be installed around the perimeter of the excavations to route intercepted groundwater in the eastern perimeter to the western perimeter *via* the north and south, as groundwater would flow pre-development. Up-gradient and down-gradient monitoring of groundwater levels to ensure	

Appendix 1 – General risk assessment schedule

Data and information				Judgement				Action (by permitting)	
Receptor	**Source**	**Harm**	**Pathway**	**Probability of exposure**	**Consequence**	**Magnitude of risk**	**Justification for magnitude**	**Risk management**	**Residual risk**
What is at risk? What do I wish to protect?	What is the agent or process with potential to cause harm?	What are the harmful consequences if things go wrong?	How might the receptor come into contact with the source?	How likely is this contact?	How severe will the consequences be if this occurs?	What is the overall magnitude of the risk?	On what did I base my judgement?	How can I best manage the risk to reduce the magnitude?	What is the magnitude of the risk after management? (This residual risk will be controlled by Compliance Assessment).
								groundwater interception ditches are performing as designed *i.e.* no groundwater truncation. During site operations, direct rainfall and surface water runoff within the excavation area Phases 1 to 9 will be managed in accordance with the approved Bow Farm Surface Water Drainage Scheme report (GWP Report No. 240707), prepared separately to discharge Condition 20 of Planning Permission Number 19/000048/CM (Worcestershire County Council). The Surface Water Drainage Scheme report is included as an Appendix of the Hydrogeological Risk Assessment (Appendix Giv of this Environmental Permit application). There will be no direct discharge of water associated with the Environmental Permit activities from the site into any local surface water receptors. See also Environmental Setting and Site Design (Appendix Gii of Environmental Permit application) and Hydrogeological Risk Assessment (Appendix Giv of Environmental Permit application).	

Appendix 1 – General risk assessment schedule

Data and information				Judgement				Action (by permitting)	
Receptor	**Source**	**Harm**	**Pathway**	**Probability of exposure**	**Consequence**	**Magnitude of risk**	**Justification for magnitude**	**Risk management**	**Residual risk**
What is at risk? What do I wish to protect?	What is the agent or process with potential to cause harm?	What are the harmful consequences if things go wrong?	How might the receptor come into contact with the source?	How likely is this contact?	How severe will the consequences be if this occurs?	What is the overall magnitude of the risk?	On what did I base my judgement?	How can I best manage the risk to reduce the magnitude?	What is the magnitude of the risk after management? (This residual risk will be controlled by Compliance Assessment).
Groundwater Source Protection Zone (SPZ) – site is not in an SPZ.	Spillage of liquids including oil, leachate from waste, contaminated rainwater runoff from waste.	Chronic effects: contamination of groundwater, requiring treatment of water or closure of borehole.	Transport through soil/groundwater then abstraction at borehole.	None	-	**None**	The site is not located within a groundwater SPZ. In any case, there will be high standards of site management. Permitted waste types are inert and have very low contamination potential. The Quantitative Hydrogeological Risk Assessment completed as part of the Hydrogeological Risk Assessment (Appendix Giv of Environmental Permit application) demonstrates that there will be no detrimental impact on the local hydrogeological or hydrological environment resulting from the activity.	Implementation of Site Operation, Waste Acceptance Criteria (Appendix Giii of Environmental Permit application), Site Equipment and Maintenance Procedure (EMS Procedure 14), Group Emergency Response Plans, Environmental Contingency Plan (EMS Procedure 15), Procedure for Vehicle Oil/Fuel Leaks (EMS Procedure 4), Spillages of Fuel and Chemicals & other Hazardous or Environmentally Damaging Substances (Emergency Response Procedure 2) in accordance with Environmental Management System (Appendix B of Environmental Permit application). A side slope Artificial Geological Barrier will be constructed on a phased basis in excavation area Phases 1 to 9 in order to provide protection to soil, groundwater and surface water at least equivalent to that resulting from an attenuation barrier/liner with a minimum thickness of 1.0m and a maximum permeability of 1 x 10^{-7}m/sec. The Triassic Branscombe Mudstone Formation of the Mercia Mudstone Group underlying the site forms an adequate natural basal geological barrier.	None

Appendix 1 – General risk assessment schedule

Data and information				Judgement				Action (by permitting)	
Receptor	**Source**	**Harm**	**Pathway**	**Probability of exposure**	**Consequence**	**Magnitude of risk**	**Justification for magnitude**	**Risk management**	**Residual risk**
What is at risk? What do I wish to protect?	What is the agent or process with potential to cause harm?	What are the harmful consequences if things go wrong?	How might the receptor come into contact with the source?	How likely is this contact?	How severe will the consequences be if this occurs?	What is the overall magnitude of the risk?	On what did I base my judgement?	How can I best manage the risk to reduce the magnitude?	What is the magnitude of the risk after management? (This residual risk will be controlled by Compliance Assessment).
Local human population – see receptors listed in Table 1.	Contamination of waters used for recreational purposes. Rainwater pumped from the excavation, potentially turbid by surface water runoff from the waste, into surface water management system – discharge of clarified runoff *via* infiltration basin.	Deterioration of water quality. Harm to human health - skin damage or gastro-intestinal illness.	Direct contact or ingestion.	Low	Low	**Low**	High standards of site management. Permitted waste types are inert and have very low contamination potential. The Quantitative Hydrogeological Risk Assessment completed as part of the Hydrogeological Risk Assessment (see Hydrogeological Risk Assessment Report (Appendix Giv of Environmental Permit application)) demonstrates that there will be no detrimental impact on the local hydrogeological or hydrological environment resulting from the activity.	Implementation of Site Operation, Waste Acceptance Criteria (Appendix Giii of Environmental Permit application), Site Equipment and Maintenance Procedure (EMS Procedure 14), Group Emergency Response Plans, Environmental Contingency Plan (EMS Procedure 15), Procedure for Vehicle Oil/Fuel Leaks (EMS Procedure 4), Spillages of Fuel and Chemicals & other Hazardous or Environmentally Damaging Substances (Emergency Response Procedure 2) in accordance with Environmental Management System (Appendix B of Environmental Permit application). A side slope Artificial Geological Barrier will be constructed on a phased basis in excavation area Phases 1 to 9 in order to provide protection to soil, groundwater and surface water at least equivalent to that resulting from an attenuation barrier/liner with a minimum thickness of 1.0m and a maximum permeability of 1 x 10^{-7}m/sec. The Triassic Branscombe Mudstone Formation of the Mercia Mudstone Group underlying the site forms an adequate natural basal geological barrier. During site operations, excavation area Phases 1 to 9	Very Low

Appendix 1 – General risk assessment schedule

Data and information				Judgement				Action (by permitting)	
Receptor	**Source**	**Harm**	**Pathway**	**Probability of exposure**	**Consequence**	**Magnitude of risk**	**Justification for magnitude**	**Risk management**	**Residual risk**
What is at risk? What do I wish to protect?	What is the agent or process with potential to cause harm?	What are the harmful consequences if things go wrong?	How might the receptor come into contact with the source?	How likely is this contact?	How severe will the consequences be if this occurs?	What is the overall magnitude of the risk?	On what did I base my judgement?	How can I best manage the risk to reduce the magnitude?	What is the magnitude of the risk after management? (This residual risk will be controlled by Compliance Assessment).
								will have a clay cut-off installed to separate the excavation area from the surrounding sand and gravel aquifer. Groundwater interception ditches will be installed around the perimeter of the excavations to route intercepted groundwater in the eastern perimeter to the western perimeter *via* the north and south, as groundwater would flow pre-development. Up-gradient and down-gradient monitoring of groundwater levels to ensure groundwater interception ditches are performing as designed *i.e.* no groundwater truncation. During site operations, direct rainfall and surface water runoff within the excavation area Phases 1 to 9 will be managed in accordance with the approved Bow Farm Surface Water Drainage Scheme report (GWP Report No. 240707), prepared separately to discharge Condition 20 of Planning Permission Number 19/000048/CM (Worcestershire County Council). The Surface Water Drainage Scheme report is included as an Appendix of the Hydrogeological Risk Assessment (Appendix Giv of this Environmental Permit application). There will be no direct discharge of water associated	

Appendix 1 – General risk assessment schedule

Data and information				Judgement				Action (by permitting)	
Receptor	**Source**	**Harm**	**Pathway**	**Probability of exposure**	**Consequence**	**Magnitude of risk**	**Justification for magnitude**	**Risk management**	**Residual risk**
What is at risk? What do I wish to protect?	What is the agent or process with potential to cause harm?	What are the harmful consequences if things go wrong?	How might the receptor come into contact with the source?	How likely is this contact?	How severe will the consequences be if this occurs?	What is the overall magnitude of the risk?	On what did I base my judgement?	How can I best manage the risk to reduce the magnitude?	What is the magnitude of the risk after management? (This residual risk will be controlled by Compliance Assessment).
								with the Environmental Permit activities from the site into any local surface water receptors. See also Environmental Setting and Site Design (Appendix Gii of Environmental Permit application) and Hydrogeological Risk Assessment (Appendix Giv of Environmental Permit application).	