

Crown Quay Lane, Sittingbourne: Environmental Risk Assessment



February 2024



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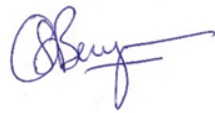
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Contents

1	INTRODUCTION	1
1.1	Background	1
2	SITE LOCATION AND SETTING	2
2.1	Proposed development	3
3	RECEPTORS	4
3.1	Local land use summary	4
3.2	Identified Receptors	4
4	POTENTIAL HAZARDS	7
4.1	Amenity hazards	7
4.1.1	Odour	7
4.1.2	Noise and vibration	7
4.2	Dust	7
4.2.1	Mud	8
4.3	Litter	9
4.4	Pests and Vermin	9
4.5	Ecology	9
4.6	Water environment	9
4.7	Gas potential	10
5	RISK ASSESSMENT	11
5.1	Hazard Pathways	11
5.2	Probability of Exposure	11
5.3	Method of Risk Estimation	11
6	CONCLUSIONS	21

TABLES

Table 2.1	Site Setting	3
Table 2.1	Surrounding Land Uses	4
Table 2.2	Potentially sensitive receptors in the vicinity of the Site	5

Table 4.1	Estimation of Risk	11
Table 4.2	Risk Assessment	12

DRAWINGS

Permit Boundary Plan	Drawing No. 330201595D1 Rev3
Sensitive Receptors Plan	Drawing No. 330201595D2 Rev2
Indicative Site Setup and Monitoring Locations	Drawing No. 6078 Rev 01

1 Introduction

1.1 Background

This Environmental Risk Assessment (ERA) has been prepared by Stantec UK Limited (Stantec) on behalf of Keltbray Built Environment Limited (Keltbray) to support an Environmental Permit application for deposit of waste for recovery operations at Crown Quay Lane, Sittingbourne, Kent, ME10 3ST (Site).

The Site occupies an area of approximately 2 hectares and is located in a “mixed use” area, with large industrial units bounding the southern and eastern boundaries of the Site and Milton Creek located to the north of the Site. The Site location is shown in Figure 2.1. The proposed Environmental Permit boundary is presented in Stantec Drawing No. 330201595D1 Rev3.

Relevant information describing the Site setting (including geological, hydrogeological, monitoring and development proposed) is detailed in the Environmental Site Setting and Design (ESSD) report (Stantec, 2022a).

The Site is proposed to be developed to an area of 107 residential properties with associated infrastructure.

It is proposed that 26,000m³ of material is deposited at the Site under the Environmental Permit. The proposed operations were assessed against the criteria for a Standard Rules 2015 No.39 Environmental Permit. The Site does not meet the location criteria for Standard Rules 2015 No.39, therefore a Bespoke Environmental Permit is being applied for.

A Hydrogeological Risk Assessment (HRA) has been produced as part of the EP application. The HRA concludes that there is unlikely to be a risk to groundwater or controlled waters from the proposed deposit for recovery operations (Stantec, 2022b).

This ERA has been prepared in response to Question 6 of Environmental Permit Application Form Part B2 (Version 17, July 2021) and accompanying Guidance Notes. The question asks for an ERA to provide a simple assessment of the risks to the environment and human health from: odour; noise; fugitive emissions (including dust and contaminated land); and accidents.

Question 6b of Environmental Permit Application Form Part B2 (Version 17, July 2021) relates to a climate change risk screening. This Site does not require a climate change risk assessment due to the expected duration of the Environmental Permit being fewer than five years.

This ERA has been completed in accordance with prevailing Environment Agency (EA) technical guidance (Environment Agency, 2017).

EA guidance requires that all receptors that are proximate to the Site, and could be reasonably affected by the activities, are identified and considered as part of the ERA. Risk prevention through operational management should also be detailed.

This report describes the site setting, identified nearby sensitive receptors and assesses the risk posed by the proposed waste operations to the local human population and environment.

2 Site location and setting

The Site location is shown in Figure 2.1. A complete description of the Site setting is provided in the ESSD (Stantec, 2022a). A summary of the Site setting and local land use is provided in Table 2.1.

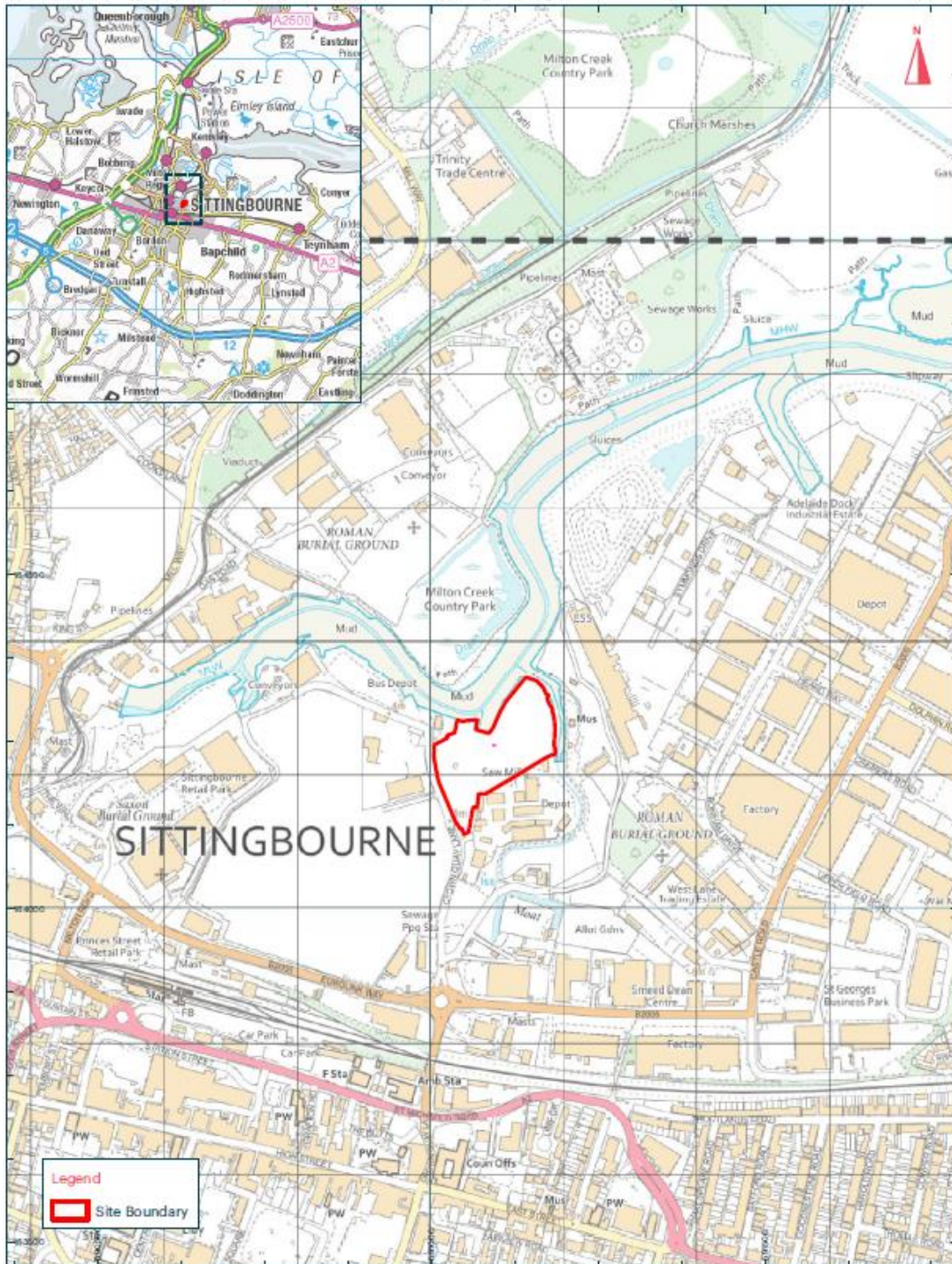


Figure 2.1 Site location

Table 2.1 Site Setting

Site address	Land East Of Crown Quay Lane Sittingbourne Kent ME10 3ST
NGR	TQ 90821 64060
Site location	The Site is located within the residential town of Sittingbourne, Kent and is located approximately 650 m north east of the town centre and high street. Existing access to the Site is via Crown Quay Lane, which runs along the eastern boundary of the Site.
Topography	The majority of the land is relatively flat, with ground elevations in the order of between 4.4 mAOD (metres Above Ordnance Datum) to 4.8 mAOD. There are slopes located along the northern and eastern boundaries, where the ground levels decrease to a low of approximately 1.3 mAOD. Three stockpiles of inert waste are located on the Site, which are proposed to be used in the recovery activity. The topography of the Site is shown on the Topographical Survey Sheet 1, Drawing No. CM/181000 (Appendix A).
Previous land use	The Site has been used for a range of land uses, including printing works, concrete production / cement works, bulk liquid storage, backfilling marshland, and docks. The most recent use of the Site was as a waste transfer site for construction and demolition waste.

2.1 Proposed development

A planning application (Ref. 20/503325/FULL) was submitted to Swale Borough Council for the following development:

“Erection of 107 residential dwelling together with associated access, infrastructure, drainage, open space and landscaping.”

Planning permission for the proposed works was subsequently granted on 22 June 2022.

The development requires the use of 14,000m³ of stockpiled materials currently stored on the Site, as well as an additional import of 12,000m³ of material. The material will be utilised to create a construction platform for the residential development.

The full planning application can be viewed online from the planning website of Swale Borough Council:

<https://pa.midkent.gov.uk/online-applications/simpleSearchResults.do?action=firstPage>

3 Receptors

3.1 Local land use summary

A summary of local land use is provided in Table 3.1.

Table 3.1 Surrounding Land Uses

Surrounding land use	North	<p>The site abuts mudflats to the north, which form part of Milton Creek. Milton Creek is designated as part of the Swale Estuary Marine Conservation Zone (MCZ) and Milton Creek Local Wildlife Site (LWS).</p> <p>To the north of the Site lies Eastwoods Wharf and part of Milton Creek Country Park. To the northwest of the Site lies Bayford Meadows Kart Circuit, approximately 140 m from the Site. Biffa Sittingbourne (household waste transfer facility) is located approximately 770 m north of the Site.</p>
	East	<p>A concrete producer (Supreme Concrete) is located off Crown Quay Lane to the immediate east of the Site. Industrial units making up Eurolink Industrial Estate are located further to the east. A small tributary of the Swale is located immediately east of the Site.</p>
	South	<p>A timber supplier (Odds Timber) is located immediately south of the Site, with other industrial units located further south. The B2006 is located approximately 230 m south of the Site, with Sittingbourne Train Station being located approximately 490 m southwest of the Site.</p>
	West	<p>A builders' merchant (Jewson Sittingbourne) is located to the west of the Site, adjacent to Crown Quay Lane. An area of disused land (allocated for residential development) is also located to the west of the Site.</p>

3.2 Identified Receptors

An assessment of potential receptors (including residential and commercial properties and businesses; public amenities; controlled waters; ecological; protected species; and cultural heritage) which are located in the vicinity of the Site and may be impacted by the proposed operations has been undertaken.

A number of sensitive receptors have been identified and are portrayed on Stantec Drawing 330201595D2 Rev2. The distance of these receptors from the Site boundary and their direction relative to the Site are detailed in Table 3.2.

Table 3.2 Potentially sensitive receptors in the vicinity of the Site

Ref	Receptor	Receptor type	Distance (m)	Direction from nearest boundary
R1	Public Highway: Crown Quay Lane	Public highway (road)	<10	W
R2	Milton Creek	Surface water feature	10	N and NE
R3	Odds Timber	Timber merchant and storage area	10	S
R4	Jewson Sittingbourne	Builders' merchant	20	W
R5	Supreme Concrete	Concrete manufacturer	60	E
R6	Milton Creek Country Park	Area of country park	80	N
R7	Bayford Meadow Kart Circuit	Outdoor go-cart track	140	NE
R8	Regent Quay	Residential development off Robertson Drive	170	SW
R9	Allotment gardens	Allotment gardens	190	SE
R10	B2006	Public highway (road)	230	S
R11	Sittingbourne Retail Park	Retail units and associated parking / infrastructure	270	W
R12	Eurolink Industrial Estate	Industrial units	450	E
R13	Sittingbourne Train Station	Railway station	490	SW
R14	Milton Creek Local Wildlife Site and Country Park	Protected habitat – Local Wildlife Site	<10	N
R15	Biffa Sittingbourne	Household waste transfer facility	770	N
R16	Deciduous woodland	Nearest deciduous woodland to the Site	910	E
R17	Murston Old Church	Scheduled Monument	1000	NE
R18	The Swale	SSSI, SPA and Ramsar Site	1600	NE

R19	Swale Estuary Marine Conservation Zone	Marine Conservation Zone	<10	N and NE
R20	Coastal and flood plain grazing marsh	Protected habitat	<50	E
R21	Mudflats	Protected habitat	<10	N and NE
R22	Coastal saltmarsh	Protected habitat	Within N and NE corner	N and NE
R23	Migratory routes for European Eel (<i>Anguilla anguilla</i>) and European Smelt (<i>Osmerus eperlanus</i>)	Protected species migratory route	<10	N and NE

4 Potential Hazards

4.1 Amenity hazards

4.1.1 Odour

Odour from waste operations can cause significant nuisance to nearby residents and businesses.

Soils to be imported to the Site will not contain putrescible materials and are highly unlikely to present any odour risk as they will consist only of materials suitable for the deposit for recovery activity.

Strict waste acceptance criteria will be implemented by the Waste Acceptance Procedures for the Site. This will ensure that any non-permitted waste is rejected from the Site. The Waste Acceptance Procedure will be implemented by way of the Environmental Management System (EMS). The EMS for the Site will also contain a complaints procedure and form, which will aim to investigate any complaint, identify the source and resolve the issue. Procedures within the EMS would then be reviewed to determine if any change in operations or management would be required to minimise the risk of such an incident occurring in the future.

For the reasons above, it is not considered that an Odour Management Plan would be required for this Site.

4.1.2 Noise and vibration

Noise has the potential to cause nuisance, loss of amenity and loss of sleep to the local human population.

Noise and vibration associated with the proposed on-Site activity will be restricted primarily to the movement and operation of Site plant and on-Site mobile plant and equipment during operational hours defined by the planning consent, which has not yet been granted. All plant will be fitted with appropriate and well-maintained silencers. All of the plant and equipment kept on the Site will be maintained in accordance with the manufacturer's recommendations. This results in a low-likelihood of excessive noise from plant due to malfunction.

4.2 Dust

Particulate emissions can arise from the unloading and on-Site handling and placement of materials, handling of existing on-Site materials and vehicle movements on-Site and on potentially dusty roads.

The Dust Management Plan (DMP) (Stantec, 2024) provides information on the operations to be carried out on the Site and how Keltbray intends to control and manage potential dust emissions.

Soil handling works will be conducted in accordance with prevailing EA guidance as well as relevant industry guidance, including but not limited to MAFF (2000) and DEFRA (2009).

In order to reduce any impact on local receptors, the method of handling existing on-Site soils will be through appropriate use of excavators and Site plant to ensure that the soils are only moved in small quantities at any one time allowing these to be stockpiled and compacted soon after to minimise further drying and the risk of dust generation.

Strict waste acceptance controls will ensure that only suitable materials will arrive to and be deposited at the Site, which will not include dry or dusty materials. Any rogue or dusty loads which may arrive on Site will either be rejected upon arrival or quarantined on-Site with sheeting prior to off-Site disposal.

Soil handling will be monitored and reviewed in high wind conditions and will be halted if mitigation measures (such as dust suppression) cannot be implemented to limit the risk of dust generation. It is generally considered that day-to-day activities should not generate dust as the materials to be handled on-Site will be generally cohesive with a natural moisture content.

Surfacing of access roads shall be maintained in a good state of repair and kept clean and free of mud and other dirt and debris at all times. If dust is generated on routes within the Site or access to the Site procedures will be implemented to control dust emissions including regular dampening of affected routes. A Site speed limit of 5 mph will be enforced on the Site which will help mitigate dust generation.

HGV vehicles entering the Site will be sheeted to prevent accidental spillage of material on the public highway and subsequent uncontrolled dust generation.

An Air Quality Assessment (Phlorum, 2020) has been completed as part of the planning application for the development at the Site. While the Site is not located within an AQMA, Swale Borough Council have declared five AQMA across the Swale, two of which are located in Sittingbourne.

Pre-application advice received from the EA in March 2021 stated that the EA consider that the deposit for recovery EP application would require the submission of a DMP due to the nature of the proposed operations and the proximity of the Site to receptors. As such, a DMP has been completed for the Site and refers to mitigation measures that will be implemented at the Site for dust emissions. The contents of the Air Quality Assessment, where relevant, are referenced within the DMP (Stantec, 2024).

It is noted that climate change may impact upon the amount of dust produced, as a result of prolonged or intense periods of drought / flooding and increases in adverse (stormy/windy) weather conditions. It is not anticipated that this would significantly impact upon the management of operations in relation to minimising dust. It should also be noted that the lifetime of the EP should be relatively short (less than one year), so there should not be a significant change in the climate during this timeframe.

4.2.1 Mud

All vehicles will have travelled to the Site via the public highway, accessing the Site via the Crown Quay Lane through the entrance along the western boundary of the Site, see Indicative Site Setup and Monitoring Locations. Although vehicles may track over potentially muddy surfaces when on-Site, a wheel wash facility will be maintained to clean any mud from vehicles before leaving the Site.

Surfacing of existing Site access shall be maintained in a good state of repair and kept clean and free of mud and other dirt and debris to reduce the risk of mud being tracked on-to the public highway.

Prior to exiting the Site vehicles will, if necessary, be stopped and inspected and cleaned of any material adhering to the wheels or chassis using the on-Site wheel-wash.

Should it become apparent that mud has been tracked off-Site, sweeping of relevant areas, including the public highway will be undertaken as soon as possible. A road sweeper will be employed if required.

The risk from tracked mud is only likely to have an impact on highways (and associated users) in the immediate vicinity of the Site. It is considered that the mitigation measures proposed to be implemented at the Site will be effective in reducing the risk of mud and debris impacting highways and associated users.

4.3 Litter

Materials received for recovery at the Site will not present a litter risk. As such, it is not considered necessary to produce a more detailed risk assessment.

4.4 Pests and Vermin

Materials received for recovery at the Site will not contain putrescible materials which may attract pests or vermin. As such, it is not considered necessary to produce a more detailed risk assessment.

4.5 Ecology

It is noted that the following ecological receptors are located in close proximity to the Site:

- R14 - Milton Creek, Sittingbourne LWS which is adjacent to the north and northeast of the site
- R19 - The Swale Estuary Marine Conservation Zone adjacent to the north and northeast.
- R20 - Coastal and floodplain grazing marsh within 50 m to the east.
- R21 - Mudflats adjacent to the north and northeast.
- R22 - Coastal saltmarsh within the northern and north-eastern parts of the Site.

R23 – Migratory routes for European Eel and European Smelt adjacent to the north and northeast. The risk from proposed Site activities to ecological receptors is considered to have been fully addressed as part of the planning process and as such it is not considered necessary to produce a more detailed risk assessment. An Ecological Appraisal (Aspect Ecology, 2021a) and Technical Note summarising the ecological net gains (Aspect Ecology, 2021b) were produced as part of the planning application. These documents summarise that proposals for the Site have sought to *“minimise impacts on biodiversity and a range of appropriate avoidance, mitigation and compensation measures have been put forward”* and identify opportunities for ecological enhancement with reference to national conservation priorities and local Biodiversity Action Plans (BAPs).

The operations at the Site are considered to not result in any direct effect on The Swale SSSI, SPA or Ramsar (R18), as the Site is well separated from these designations by physical barriers including an existing sea wall and existing residential / industrial development.

4.6 Water environment

Potential risks from proposed Site activities to the local water environment include potential leaching of contaminants and / or suspended solids from imported materials stored on the Site and run-off to local waters. Milton Creek [R2] is located in close proximity to the Site.

Keltbray proposes to apply strict Waste Acceptance Procedures and quality considerations for all waste materials accepted for the restoration of the Site. It is therefore not considered that the works pose a significant risk to the local water environment.

A copy of the Operator's Waste Acceptance Procedure is included as **Appendix D** of the ESSD (Stantec, 2022a). It is considered that the proposed waste acceptance procedures summarised above and detailed in the accompanying waste acceptance procedure are robust and beyond the basic requirements for a deposit for recovery activity. As such it is considered that the risk of rogue loads being deposited at the Site is appropriately mitigated.

Additionally, potential impacts could occur on groundwater and surface water quality from any spills associated with plant operating on the Site. However, these will be addressed by following best practice for fuel handling and storage.

The Operator will employ industry best practice measures to provide secure and adequate containment for fuels and oils stored at the Site.

It is not anticipated that impacts posed by climate change will have a significant impact upon the Site, given the management / mitigation measures that are proposed to be put in place.

The risk associated with emissions to controlled waters are detailed in Table 4.5.

A Hydrogeological Risk Assessment (HRA) has been prepared as part of the EP application that this ERA supports. The HRA considers that the proposed operations at the Site are unlikely to pose a risk to groundwater and controlled waters.

4.7 Gas potential

The materials that will be used on the Site have no or very low gas generation potential. All materials used for the restoration will be subject to comprehensive checking arrangements and appropriate testing to ensure that they are suitable before they are accepted onto the Site. Therefore, given the absence of materials with a gas generation potential no provision for landfill gas management is considered necessary at the Site.

It is not deemed necessary to undertake a detailed landfill gas risk assessment for the Site since the Site is a deposit for recovery activity and not a landfill. In any case, prevailing EA guidance (2004) indicates that new inert landfills do not pose a landfill gas hazard.

5 Risk Assessment

5.1 Hazard Pathways

When choosing the receptors, the closest and the most sensitive (if different from the closest) have been considered in each direction from the hazard. The risk assessment accounts for the mechanism of transport to the identified receptor.

5.2 Probability of Exposure

Probability of exposure is determined by the distance of the receptor to the Site and the likelihood of the hazard affecting the receptor (e.g. in the case of dust risks this would include consideration of the frequency of the prevailing wind in that direction).

5.3 Method of Risk Estimation

Table 5.1 Estimation of Risk below has been used to demonstrate the estimation of risk from consideration of the magnitude of consequences and probabilities arising from operations to be carried out under the Environmental Permit.

Table 5.1 Estimation of Risk

		<i>Consequence</i>			
		High	Medium	Low	Very low
Probability	High	High	High	Medium/low	Near Zero
	Medium	High	Medium	Low	Near Zero
	Low	High/medium	Medium/low	Low	Near Zero
	Very low	High/medium/low	Medium/low	Low	Near Zero

Although the above table is a gross simplification that cannot represent the true complexity of risk assessment, it has been used as a guide in preparing this environmental risk assessment report.

Table 5.2 Risk Assessment

Receptor	Source	Harm	Pathway	Probability of Exposure	Consequence	Magnitude of Risk	Justification for magnitude	Risk Management	Residual Risk
Local human population – residents in residential development of Regent Quay (R8), workers and visitors to nearby industrial units and workplaces (R3, R4, R5, R7, R11, R12, R13, R15)	Releases of particulate matter (dust)	Harm to human health - respiratory irritation and illness.	Air transport then inhalation.	Medium	Medium	Medium	Permitted waste types are mainly inert and have a low potential to produce bioaerosols. The operations undertaken on the Site may produce dust from movement of vehicles in dry and/or windy weather.	<p>It is considered that the requirements of planning will provide adequate measures for controlling and monitoring of dust.</p> <p>A Dust Management Plan (DMP) has been prepared, which includes mitigation measures to be implemented on the Site to minimise the risk of dust leaving the Site boundary. It should also be noted that:</p> <ul style="list-style-type: none"> All HGV vehicles to be sheeted when arriving on-Site; Wastes will consist primarily of inert soils and soil forming materials, which are unlikely to generate dust. Significantly dusty materials will not be accepted; 	Low
Local human population - residents in residential development of Regent Quay (R8), workers and visitors to nearby industrial units and workplaces (R3, R4, R5, R7, R11, R12, R13, R15)	Releases of particulate matter (dust)	Nuisance - dust on cars, clothing etc.	Air transport then deposition.	Medium	Low	Medium	Permitted waste types are mainly inert. The operations undertaken on the Site may produce dust from movement of vehicles in dry and/or windy weather.	<ul style="list-style-type: none"> Site to be well maintained, with use of road sweeper if required either on the on-Site access routes or local roads. Spraying will be used to control dust generation from Site surfaces; Site speed limit of 5 mph will be enforced on the Site; Wheel wash to be used on vehicles to avoid trafficking of potentially dust generating mud; Operations to be suspended in particularly windy periods; Should any dust be observed crossing the Site boundaries, then all infilling and processing operations shall cease until such 	Low

Receptor	Source	Harm	Pathway	Probability of Exposure	Consequence	Magnitude of Risk	Justification for magnitude	Risk Management	Residual Risk
								time as the dust drift has been brought under control; <ul style="list-style-type: none"> All works will be conducted in accordance with prevailing Environment Agency guidance as well as relevant industry guidance, including but not limited to MAFF (2000) and DEFRA (2009); and All events or complaints received associated with dust will be documented under the Site EMS. 	
Local human population - residents in residential development of Regent Quay (R8), workers and visitors to nearby industrial units and workplaces (R3, R4, R5, R7, R11, R12, R13, R15)	Litter.	Nuisance, loss of amenity and harm to animal health.	Air transport then deposition.	Low	Low	Low	Local residents often sensitive to litter. Wastes to be accepted at the Site have a very low litter potential.	Strict waste acceptance procedures will be implemented on the Site. Site and surrounding access roads will undergo housekeeping checks to remove observed litter.	Very low
Local human population - residents in residential development of Regent Quay (R8), workers and visitors to	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.	Low	Medium	Low	Local residents often sensitive to waste and mud on roads. Mitigation measures including use of roadsweeper and wheelwash considered to mitigate likelihood / amount	Strict waste acceptance procedures will be implemented on the Site. Surrounding access roads are checked regularly and a road sweeper is deployed as required.	Low

Receptor	Source	Harm	Pathway	Probability of Exposure	Consequence	Magnitude of Risk	Justification for magnitude	Risk Management	Residual Risk
nearby industrial units and workplaces (R3, R4, R5, R7, R11, R12, R13, R15)							of mud and waste on local roads.		
Local human population - residents in residential development of Regent Quay (R8), workers and visitors to nearby industrial units and workplaces (R3, R4, R5, R7, R11, R12, R13, R15)	Odour	Nuisance, loss of amenity.	Air transport.	Very Low	Very Low	Very Low	Permitted waste types are mainly inert and therefore should not be odorous.	Strict waste acceptance procedures will be implemented on the Site to ensure that incoming waste loads do not contain malodorous materials.	Very low
Local human population - residents in residential development of Regent Quay (R8), workers and visitors to nearby industrial units and workplaces (R3, R4, R5, R7, R11, R12, R13, R15)	Noise and vibration	Nuisance, loss of amenity, loss of sleep.	Noise through the air and vibration through the ground	Medium	Medium	Medium	Local residents often sensitive to noise and vibration. Vehicle movements have the potential to produce noise and vibration.	<p>It is considered that the requirements of planning will provide adequate measures for controlling and monitoring of noise and vibration.</p> <p>It should also be noted that:</p> <ul style="list-style-type: none"> All vehicles and plant to be well maintained with silencers; Ongoing noise monitoring by operatives will be carried out to determine any significant impact to nearby receptors; and 	Low

Receptor	Source	Harm	Pathway	Probability of Exposure	Consequence	Magnitude of Risk	Justification for magnitude	Risk Management	Residual Risk
								<ul style="list-style-type: none"> All events or complaints received associated with noise/vibration will be documented under the Site EMS. 	
Local human population - residents in residential development of Regent Quay (R8), workers and visitors to nearby industrial units and workplaces (R3, R4, R5, R7, R11, R12, R13, R15)	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	Low	Low	Wastes are limited to mainly inert wastes that are not normally attractive to animals and birds. There is likely to be a natural population of animals and birds at and around the Site due to the proximity of Milton Creek to the Site.	Strict waste acceptance procedures will be implemented on the Site to ensure that incoming waste loads do not contain material that could attract scavenging animals.	Very low
Local human population (residents in residential development of Regent Quay (R8), workers and visitors to nearby industrial units and workplaces (R3, R4, R5, R7, R11, R12, R13, R15)) and	Pests (e.g. flies)	Harm to human health. Nuisance and loss of amenity.	Air transport and over land.	Low	Medium	Medium	Wastes are limited to mainly inert wastes that are not normally likely to encourage pest infestations.	Strict waste acceptance procedures to be implemented on the Site to ensure that incoming waste loads do not contain material that could attract pests. Site will be checked regularly for evidence of pest infestations.	Low

Receptor	Source	Harm	Pathway	Probability of Exposure	Consequence	Magnitude of Risk	Justification for magnitude	Risk Management	Residual Risk
local environment									
Local human population (residents in residential development of Regent Quay (R8), workers and visitors to nearby industrial units and workplaces ((R3, R4, R5, R7, R11, R12, R13, R15)) and local environment.	Flooding of site.	If waste contaminated water is washed off site it may contaminate buildings, gardens, watercourses and natural habitats.	Flood waters.	High	Medium	Medium	Permitted waste types are mainly inert so any waste washed off site will add to the volume of local post-flood clean-up workload rather than the hazard. The majority of the Site is located within Flood Zone 3 for tidal flooding.	Strict waste acceptance procedures will be implemented on the Site to ensure that only suitable waste types are accepted onto the Site.	Low
Local human population (residents in residential development of Regent Quay (R8), workers and visitors to nearby industrial units and workplaces (R3, R4, R5, R7, R11, R12, R13, R15)) and /or livestock gaining	All on-site hazards, wastes, machinery, and vehicles.	Bodily injury.	Direct physical contact .	Low	High	Medium -	Permitted waste types are inert and therefore there is only a low risk from the waste itself. However the nature of the operations to be undertaken at the Site will mean that stockpiles are likely to be present on the Site (as they are currently). Voids could be present where people could fall in and there is a higher risk in wet conditions were deep mud could form.	Site will be manned during working hours. Fencing located along all boundaries of the Site to prevent unauthorised access. Outside of working hours the Site will be appropriately secured to prevent unauthorised access.	Low

Receptor	Source	Harm	Pathway	Probability of Exposure	Consequence	Magnitude of Risk	Justification for magnitude	Risk Management	Residual Risk
unauthorised access to the waste operation.							No livestock considered likely within close proximity to the Site.		
Local human population (residents in residential development of Regent Quay (R8), workers and visitors to nearby industrial units and workplaces (R3, R4, R5, R7, R11, R12, R13, R15)) and the environment. -	Arson and/ or vandalism causing the release of polluting materials to air (smoke or fumes) and firewater or spillage of polluting liquids to 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 run-off from and via surface water drains and ditches.	Low	Medium	Low	Permitted waste types are mainly inert so very low risk of combustion.	Site will be manned during working hours. CCTV is present on the Site. Outside of working hours the Site will be appropriately secured to prevent unauthorised access. Any plant remaining on-Site will be left in a secure manner.	Low
Local human population (residents in residential development of Regent Quay (R8), workers and visitors to nearby industrial units and workplaces (R3, R4, R5, R7, R11, R12, R13, R15)) and	Accidental fire causing 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. Pollution of water or land.	Air transport of smoke. Spillages and contaminated firewater by direct run-off from and via surface water drains and ditches.	Low	Medium	Medium	Permitted waste types are mainly inert so very low risk of combustion.	All plant and equipment on the site are checked and maintained as part of a maintenance regime. All plant and equipment is maintained in line with manufacturers specifications. Actions will be taken to fix plant / equipment in the event of a failure / breakdown to address the incident as quick as possible. Management will decide if operations will be paused or ceased. This decision will be largely based on if the plant is integral to the operation and likely to pose a wider	Low

Receptor	Source	Harm	Pathway	Probability of Exposure	Consequence	Magnitude of Risk	Justification for magnitude	Risk Management	Residual Risk
local environment.								concern to the site and/or the environment.	
Local human population and local environment.	Build up and emissions of gas from old waste deposits on the permitted site	Respiratory irritation, illness and nuisance to local population. Risk of explosion and injury to staff and local population.	Gas migrating laterally through waste deposit and building up in certain areas.	Low	High	Medium	Waste deposited at the Site in stockpiles has been assessed for re-use as part of the "Stockpile Re-Use Risk Assessment". Waste on-site undergoing stabilisation. The Site is not located on a historic, closed or operational landfill	Strict waste acceptance procedures are to be implemented to ensure that only inert wastes will be accepted at the Site.	Low
All surface waters close to and downstream of site (Milton Creek (R2))	Spillage of liquids, including oil.	Acute effects: fish and invertebrate kill .	Direct run-off from site across ground surface, via surface water drains, ditches etc.	Medium	Medium	Medium	Wastes to be accepted at the Site are solid and are mainly inert. Potential for spillage from any fuel and oil storage for machinery or directly from machinery operating on the Site. Surface water features are located in close proximity to the Site (within 10m) of boundary.	No point source discharges to controlled waters. All liquids will be provided with secondary containment. The EMS for the Site will details how any spillages on the Site will be dealt with. Plant and machinery will be maintained in accordance with the manufacturer's instructions.	Low
All surface waters close to and downstream of site (Milton Creek (R2))	Leachate from waste and contaminated rainwater run-off from waste e.g. suspended solids.	If waste contaminated water is washed off site it may contaminate watercourses and natural habitats leading to chronic effects: and	Surface waters, leachate from infiltration through the waste	Medium	Medium	Medium	Although surface watercourses are located in close proximity to the Site, the permitted waste types are mainly inert so any waste washed off the site will not be chemically hazardous.	Strict waste acceptance procedures will be implemented at the Site to ensure that only suitable waste types are accepted.	Low

Receptor	Source	Harm	Pathway	Probability of Exposure	Consequence	Magnitude of Risk	Justification for magnitude	Risk Management	Residual Risk
		deterioration of water quality.							
Groundwater (R19) - majority of the Site is located in a GSPZ 1. An area in the northeast of the Site is located in GSPZ 2.	Leachate from waste and contaminated rainwater run-off from waste e.g. Suspended solids.	Chronic effects: contamination of groundwater, requiring treatment of water or closure of borehole.	Transport through soil/groundwater then extraction at borehole.	Medium	Medium	Medium	The Site is located within a GSPZ. The HRA completed for the Site considers it unlikely for the deposit for recovery operations to have a negative impact on groundwater (or controlled waters).	Implementation of the EMS will ensure that no substances contaminate the groundwater at the site. Strict waste acceptance procedures will be implemented on the Site to ensure only suitable waste types are accepted under the EP.	Low
Protected nature conservation sites – Milton Creek LWS (R14), Swale Estuary Marine Conservation Zone (R19), Mudflat (R22), Protected species migratory routes (R23), The Swale (SSSI, SPA and Ramsar Site) (R18) and deciduous woodland (R16)	Dust, noise, contaminated run-off leachate etc.	Harm to protected sites through contamination, smothering, disturbance etc.	Any	Medium	Medium	Medium	Emissions to air may cause harm to and deterioration of nature conservation sites. Vehicles moving on and around site causing disturbance through noise. Potential for run-off and siltation of habitats. Milton Creek LWS is located in close proximity to the Site, as well as mudflats, saltmarsh, the Swale Estuary Marine Conservation Zone and migratory routes of protected species. It is particularly noted that areas of saltmarsh are located within the northern part of the Site.	Implementation of the Site's EMS should lead to harm not being caused to the nearby protected sites. It is considered that the management of potential hazards would result in a low residual risk to the protected sites and species . An Ecological Appraisal (Aspect Ecology, 2021b) was completed as part of the planning application for the Site and sets out mitigation measures to protect habitats, ecological features and associated fauna.	Low

Receptor	Source	Harm	Pathway	Probability of Exposure	Consequence	Magnitude of Risk	Justification for magnitude	Risk Management	Residual Risk
							<p>Due to the distance of the deciduous woodland and The Swale SSSI, SPA and Ramsar Site from the Site, it is considered unlikely that operations will impact these sites.</p>		

6 Conclusions

The risk assessments detailed in this document indicate that the proposed Site activities are considered unlikely to cause any significant disturbance to relevant identified environmental receptors.

Although various receptors (including businesses, surface watercourses and residential properties) are in close proximity to the Site, the proposed operational management controls are considered adequate to constrain any potential impacts relating to odour, noise, vibration, dust, mud, litter, pests and vermin.

The risks to controlled waters have been addressed in detail in the qualitative HRA completed as part of the EP application, which concludes that there is unlikely to be a significant risk posed to groundwater or controlled waters from the proposed recovery operations.

Accidents such as fire / explosion or leakages pose a potential risk to the local environment and associated sensitive receptors. However, safe working practices, appropriate control measures and limited on-Site plant make the occurrence of such incidents unlikely.

The Site will be operated in accordance with a written EMS which will include procedures and forms to provide instruction to Site operatives.

It is therefore concluded that with the use of appropriate mitigating controls, the proposed deposit of waste for recovery operations on the Site will not present a significant risk to controlled waters or identified sensitive receptors.

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DRAWINGS



Drawing No.: 330201595D1

Title: Permit Boundary Plan

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Client
Keltbray Built Environment
Limited

Date
February 2024

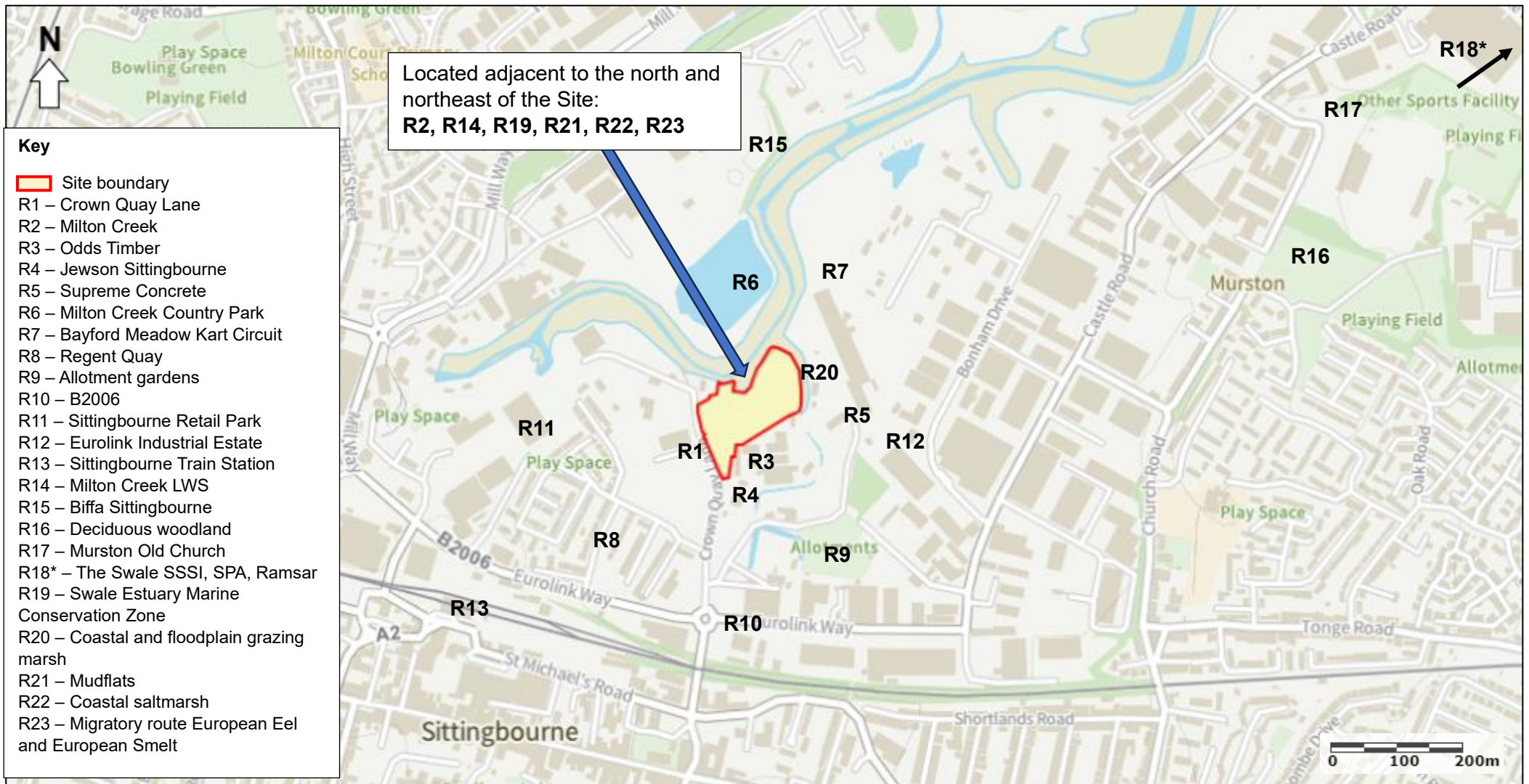
Original
A4


Site
Land east of Crown Quay Lane,
Sittingbourne, ME10 3ST

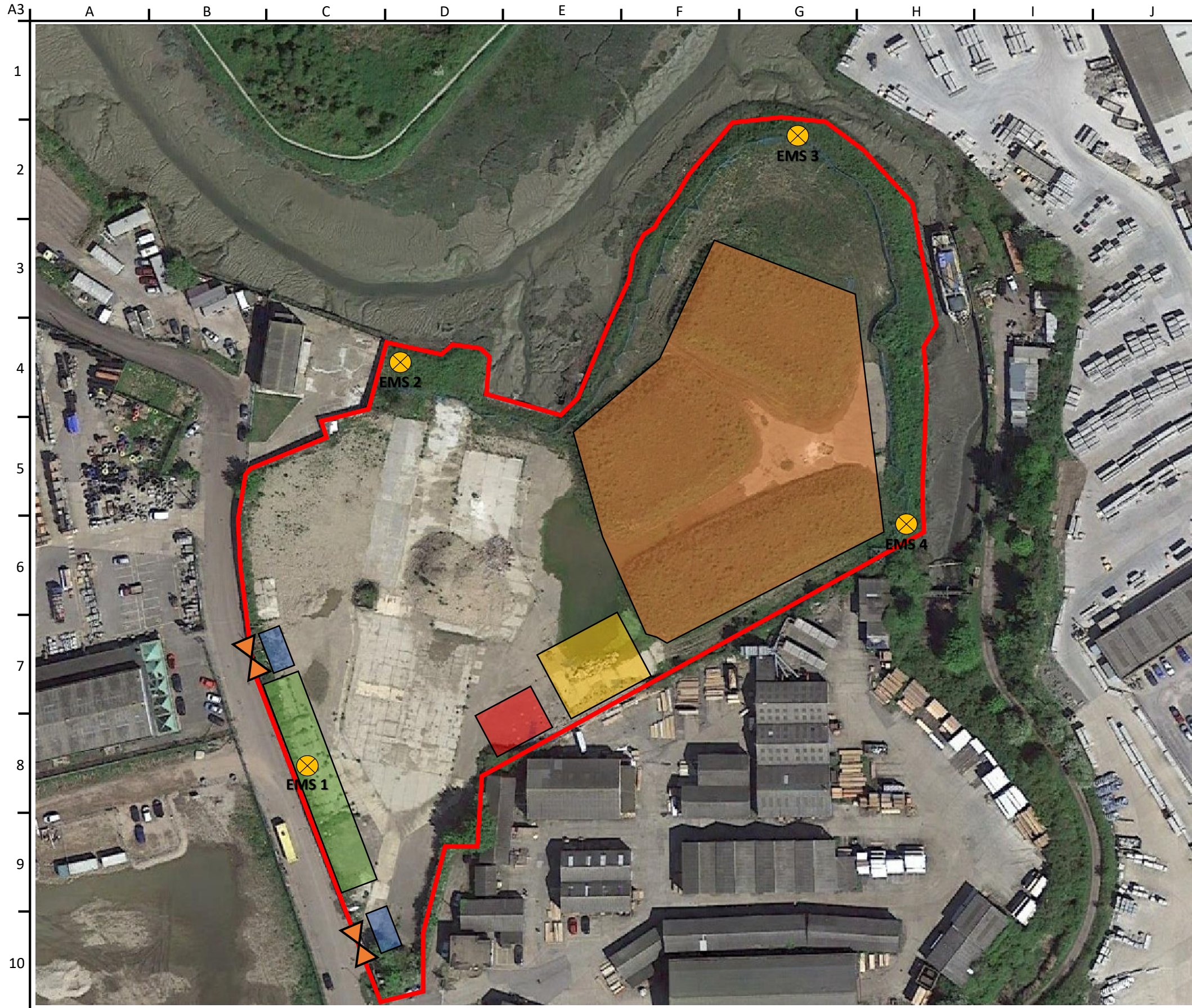
Drawn
Final

Revision
3





Drawing No.: 330201595D2 Title: Sensitive Receptors © Crown copyright. All rights reserved. Licence number AL 100015683	Client Keltbray Built Environment Limited	Site Land east of Crown Quay Lane, Sittingbourne, ME10 3ST	
	Date February 2024	Drawn Final	
	Original A4	Revision 2	



Notes:

1. This drawing is to be read in conjunction with Keltbray's Management Plan and relevant engineer's drawings and specifications.
2. Drawings should not be scaled either by hand or from the computer digital data, only figured dimensions are to be used.
3. Not to scale

- Key:**
- Operating Site Boundary (2.4m Hoarding)
 - ⊗ Environmental Monitoring Location
 - ▶ Access / Egress
 - Site Welfare / Office
 - Jet Wash / Wheel wash Facilities
 - Plant Storage Area
 - "Incoming Waste" Storage Area
 - Quarantine Area

Client **Bellway**

Keltbray Job No. 6078 Rev. 01

Project Name
Crown Quay Lane, Sittingbourne

Drawing Title
FIGURE 1. Indicative Site Setup and Monitoring Locations

01	30.03.21	DV	TS	TS
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Issued with Noise and Dust Management Plan

Rev	Date	By	Checked	Approved

Drawing Ref
n/a



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