

NOISE & VIBRATION MANAGEMENT PLAN

10 Merse Road, Redditch

Kaug Refinery Services Limited

Version:	1.8	Date:	25/10/2024		
Doc. Ref:	2765-010-NVMP	Author(s):	JU/JC	Checked:	DY
Client No:	2765	Job No:	010		



Oaktree Environmental Ltd

Waste, Planning & Environmental Consultants



Oaktree Environmental Ltd, Lime House, 2 Road Two, Winsford, Cheshire, CW7 3QZ
Tel: 01606 558833 | E-Mail: sales@oaktree-environmental.co.uk | Web: www.oaktree-environmental.co.uk
REGISTERED IN THE UK | COMPANY NO. 4850754

© OAKTREE ENVIRONMENTAL LTD – THE UNAUTHORISED COPYING OR REPRODUCTION OF THIS DOCUMENT (OR PART THEREOF) IS STRICTLY PROHIBITED

Document History:

Version	Issue date	Author	Checked	Description
1.0	15/12/2022	TB	DY	Internal draft
1.1	06/01/2023	TB	DY	Amended following client comment
1.2	14/04/2023	TB	DY	Submitted to LPA with planning application
1.3	13/07/2023	IA/TB	DY	Submitted to EA
1.4	18/08/2023	TB	DY	Operational hours amended
				Noise management table amended
1.5	29/08/2023	TB	DY	Submitted to LPA
1.6	01/03/2024	TB	DY	Updated for permit application
1.7	19/07/2024	JU/JC	JC	Updated based on updated NIA and comments made by the EA.
1.8	18/10/2024	JC	DY	Updates in response to Schedule 5 Notice

CONTENTS

DOCUMENT HISTORY:	1
CONTENTS:	2
LIST OF TABLES:	3
LIST OF APPENDICES:	3
1 INTRODUCTION	4
1.1 SITE HISTORY / BACKGROUND	4
1.2 SITE LOCATION	4
1.3 HOURS OF OPERATION	5
1.4 ENVIRONMENTAL REGULATION	5
2 SENSITIVE RECEPTORS	6
2.1 SITE RECEPTORS	6
2.2 OTHER NOISE SOURCES	6
3 SITE OPERATIONS	7
3.1 WASTE DELIVERIES	7
3.2 PLANT AND EQUIPMENT	7
4 NOISE MANAGEMENT AND CONTROLS	9
4.1 NOISE SENSITIVE RECEPTORS	9
4.2 NOISE SOURCES	9
4.3 NOISE MANAGEMENT TABLE	9
4.4 RECORDING	14
4.5 EMERGENCIES	14
5 ACTIONS WHEN COMPLAINTS ARE RECEIVED	15
5.1 COMPLAINTS PROCEDURE	15
5.2 COMPLAINTS RECORDING	16
6 TRAINING	18
6.1 TRAINING REGIME	18
6.2 VEHICLE / PLANT PREVENTATIVE MAINTENANCE TRAINING	18
6.3 LIAISON WITH NEIGHBOURS	18

List of Tables

Table 2.1 – Distances to Selected, Representative Sensitive Locations.....	6
Table 3.1 – Plant and Machinery to be Used on Site	7

List of Appendices:

Appendix I - Drawings

Drawing No. 2765-010-02 – Permit Boundary Plan

Drawing No. 2765-010-03 – Proposed Layout Plan

Appendix II - Complaints Procedure and Recording Form

1 Introduction

1.1 Site history / background

- 1.1.1 Oaktree Environmental Ltd have prepared a Noise & Vibration Management Plan (NVMP) for a site situated at 10 Merse Road, Redditch. This has been prepared in support of an Environmental Permit (EP) application for the proposed operation of a facility for the recovery of precious metals from wastes. This has been updated following a recent request from the Environment Agency (EA) for more information, dated 24/06/2024.
- 1.1.2 The proposed operation comprises a specialist facility for the recovery and recycling of precious metals from various metal containing wastes. Up to 250 tonnes per annum of metal containing wastes will be imported to site. Various processing operations will be undertaken to recover precious metals from the waste streams.
- 1.1.3 This NVMP will assess risks arising from the operations and allow Kaug Refinery Services Limited to implement appropriate mitigation measures. The measures outlined in this NVMP will be put in place by site management of Kaug Refinery Services Limited to ensure noise and vibration is controlled using Best practicable means (BPM) to ensure the receptors listed in Section 2 below are not affected by the above proposals.

1.2 Site Location

- 1.2.1 The site includes an existing building comprising industrial and office use with associated parking area. The site is located within a wider industrial estate/area and therefore suitable for this type of development. It is understood that the existing building has been in recent active industrial/commercial use. At present, parking for staff and visitors is provided to the South-Western and North-Western side of the building. The site is accessed via Merse Road, via a dedicated access point.

- 1.2.2 Reference should be made to Drawing No. 2765-010-02 for the general location of the site and permit boundary. All references to 'the site' in this statement shall mean this area.

1.3 Hours of Operation

- 1.3.1 The site will routinely operate during the following hours:

Monday to Friday	06:00 – 17:00
Saturdays	No operations
Sundays and Bank Holidays	No operations

- 1.3.2 The abatement plant (scrubber) serving the acid processing area and the alkaline process area extraction system will both be run for 24 hours per day, consistent with operations at the applicant's existing site. This is to ensure that any residual fumes are abated/dispersed whilst the system is cooling down. However, there will be no operation of waste processing plant, including chemical, physical and thermal processing, nor delivery or export of materials to and from site outside of the above hours.

1.4 Environmental Regulation

- 1.4.1 An EP will be required to be in place for the site, with day-to-day operations regulated by the EA. Potential impacts on air, land and water will be fully controlled and regulated under the EP.

2 **Sensitive Receptors**

2.1 **Receptors**

- 2.1.1 The receptors are detailed in the table below with approximate distances outlined. Receptors which are over 500m from the site have not been included within the table below as it is considered that they will not be affected by any potential noise pollution arising from the site.

Table 2.1 – Distances to Selected, Representative Sensitive Locations

Boundary	Receptor	Approximate distance from boundary of site (m)
West	Dwellings off Hillmorton Close	90
West	Dwellings off Latchford Close	140
West	Dwellings off Fairford Close	225
South west	Offices located on the Industrial estate/Off Eagle Road	400

2.2 **Other Noise Sources**

- 2.2.1 There are numerous additional noise sources within the vicinity of the site given its location within the Moons Moat North Industrial Estate. These include but are not limited to; several warehouses, manufacturing processes, metal fabricators and truck repair services.

3 Site Operations

3.1 Waste Deliveries

3.1.1 Waste will be delivered and removed from the site via the existing access to the south of the site. Upon arrival, an operative will direct the driver to access the building via the roller shutter along the southern façade. This will only be open at time of delivery.

3.1.2 Deliveries/removals from the site will primarily consist of Kaug Refinery Services Limited's own vehicles/contracts in the form of transit vans and LGVs.

3.2 Plant and Equipment

3.2.1 The table below details the plant/equipment to be used on site. Only trained operators will be permitted to drive/operate the plant/equipment listed below.

Table 3.1 – Plant and Machinery to be Used on Site

Type of plant/equipment	No.
Air compressor	1
Steam raising boiler	2
Shredder	1
Barrelling/sieving equipment	1
Acid fume scrubbing system	1
Acid effluent storage tanks	5
Water chilling system	1
Gas fired thermal appliance for metal contamination with fume scrubbing system	1
Gas fired furnace	1
Induction furnace	1
Electric dying oven	1
Alkali extraction system	1
Alkali cyanide stripping line with barrel and hoist	1
Alkaline effluent storage tanks	3
Exhaust flues	4

3.2.2 The vast majority of plant is considered negligible however has been included in the noise model.

- 3.2.3 All plant on site will be subject to annual manufacturer maintenance to ensure in proper working order. This will be in the form of service contracts, as applicable.

4 Noise Management and Controls

4.1 Noise Sensitive Receptors

4.1.1 The site lies within an industrial setting with the nearest noise sensitive residential receptors located 90m to the west. The layout of the site has been planned in order to contain all the required operations and activities within the site, thus limiting the impacts from noise on the above receptors.

4.1.2 In terms of potential noise impact, whilst the development proposed will be operated using the Best Practicable Means at all times, this site-specific NVMP has been prepared in order to ensure the noise levels at the site can be managed appropriately and reduce any impact on the surrounding receptors.

4.2 Noise Sources

4.2.1 The main sources of noise which could arise from the site operations are as follows:

- a) Ventilation noise associated with the 4no. flues.
- b) Operation of the PCB shredder,
- c) Small vehicles travelling to and from the site (e.g. staff and visitor's cars, courier van deliveries etc.)
- d) Repairs
- e) Caustic scrubber (external)

4.3 Noise Management Table

4.3.1 A site-specific NVMP table overleaf details the above noise sources and how the current and proposed infrastructure on site will reduce the impact of noise to surrounding properties.

4.3.2 In addition to the existing controls in this NVMP, the complaints procedure further discussed in section 5 will be used if any noise complaints are received. If a noise complaint is received and the applicant has been made aware, immediate action will

take place reviewing and identifying whether any changes to existing procedures are required or if new procedures need to be put in place. Any changes which may be required will be implemented immediately.

Source(s)	Receptor(s)	Consequence	Magnitude of noise source	Characteristic of noise source	Probability of noise disturbance	Remedial Action / Recommendations / Comments	Assessment Outcome following actions / recommendations
LGVs travelling to and from the site for delivery / collection of waste	See Section 2	Noise pollution	Low	Continuous (Low Pitch)	Low	Engines will be switched off when the vehicles are not being used. The existing access road to the operational area site will be maintained in good state of repair to prevent unnecessary noise being generated. Implementation of a 5mph speed limit onsite. All drivers are required to enter and exit the site with due consideration for neighbours. All mobile plant and other vehicles used will benefit from white noise reverse alarms. A no idling policy will be in place and staff/third party drivers will be told not to rev engines.	Low
Operation of the PCB shredder	See Section 2	Noise pollution	Low	Continuous (Low Pitch)	Low	Management will ensure that all plant operated by Kaug Refinery Services Limited is functioning suitably i.e. moving parts to be regularly lubricated. Any malfunctions in plant i.e. missing screws/bolts which result in excessive noise will be de-commissioned until an alternative loading plant sourced. Roller shutter doors to remain closed outside of times when materials are delivered/exported to and from site. Also to remain closed before 7am.	Low

Source(s)	Receptor(s)	Consequence	Magnitude of noise source	Characteristic of noise source	Probability of noise disturbance	Remedial Action / Recommendations / Comments	Assessment Outcome following actions / recommendations
Extraction system	See Section 2	Noise pollution	Low	Continuous (Low Pitch)	Low	Mitigation of noise from the associated flues will be implemented to ensure noise is controlled to an acceptable level. Any malfunctions in plant i.e. missing screws/bolts which result in excessive noise will be de-commissioned until an alternative loading plant sourced.	Low
Small vehicles travelling to and from the site (e.g. staff and visitor's cars, courier van deliveries, forklifts etc.)	See Section 2	Noise pollution	Low – Very Low	Intermittent (Low Pitch)	Low	All those working on and visiting the site to be made aware of need for considerate driving and keeping vehicles well maintained. Small vehicles are not considered to be an issue in relation to excessive noise which could cause a complaint. Implementation of a 5mph speed limit onsite. All drivers are required to enter and exit the site with due consideration for neighbours.	Very Low / Negligible
Repairs	See Section 2	Noise pollution	Very Low	Occur at a specific time (Low Pitch)	Low	If repairs to the site are required, the work is to be undertaken with due regard for the possible noise nuisance and during working day hours. In the event of major repair work being undertaken which is likely to cause significant noise and disruption, neighbouring residents and the Environment Agency will be notified in advance and would not commence without agreement unless in extenuating circumstances i.e. to minimise a fire occurring.	Very Low / Negligible
Other plant items	See Section 2	Noise pollution	Low	Continuous (Low Pitch)	Low	Management will ensure that all plant operated by Kaug Refinery Services Limited is functioning suitably i.e. moving parts to be regularly lubricated. Any malfunctions in plant i.e. missing screws/bolts which result in excessive noise will be de-commissioned until an alternative loading plant sourced. Roller shutter doors to remain closed outside of times when materials are delivered/exported to and from site. Also to remain closed before 7am.	Low

Source(s)	Receptor(s)	Consequence	Magnitude of noise source	Characteristic of noise source	Probability of noise disturbance	Remedial Action / Recommendations / Comments	Assessment Outcome following actions / recommendations
Compressor and grinder/crusher	See Section 2	Noise pollution	Low	Intermittent	Low	Management will ensure that all plant operated by Kaug Refinery Services Limited is functioning suitably i.e. moving parts to be regularly lubricated. Any malfunctions in plant i.e. missing screws/bolts which result in excessive noise will be de-commissioned until an alternative loading plant sourced. Roller shutter doors to remain closed outside of times when materials are delivered/exported to and from site. Also to remain closed before 7am.	Low

4.4 Recording

- 4.4.1 Site management will record complaints in the site diary or complaints report form in Appendix II and contact the EA within 24 hours if a complaint is received.

- 4.4.2 Site management will be required to make a note of any unavoidable events such as plant failure, in the site diary, rather than just actual complaints received and notify the EA within 24 hours. This will ensure that if complaints are received retrospectively from either the EA or directly, any circumstances which led to that complaint as a result of elements outside of the operator's control would be able to be attributed (or, at least, in part) to the cause of the complaint. Where all appropriate measures fail to prevent an activity causing unacceptable levels of noise pollution, the activity will be stopped.

4.5 Emergencies

- 4.5.1 In the event of any unforeseen circumstances i.e. faulty equipment, the site manager will make an assessment of whether to cease activities/all operations with the main emphasis on site being to reduce any noise impacts.

5 Actions when complaints are received

5.1 Complaints Procedure

- 5.1.1 If any noise complaints are received, site management will complete a 'complaints and events log' using complaints forms (in Appendix II), both of which will be kept for inspection on request by the LA, EA or third parties. Details of information to be completed are dates, nature of complaint, weather conditions at the time of the complaint, investigation details, action taken and a signature (as a minimum).
- 5.1.2 Noise complaints will be prioritised and investigated without delay or by end of working day only in extenuating circumstances. This will also apply to complaints received both directly and via other sources (e.g. EA or local authority). Where investigation substantiates the complaint, fully or partially, then remedial action will be taken immediately and if measures taken fail to stop the pollution, then the activity must be stopped and not restarted unless and until additional measures have been implemented to prevent the emission causing pollution. The EA will be contacted in the event the complaint cannot be escalated. Following a complaint and if it is deemed correct following investigation, the appropriate action will be taken to prevent the issue from reoccurring i.e. evaluation of current abatement measures, site operations, additional abatement measures and re-training of staff via toolbox talks.
- 5.1.3 The operator will make a note of any unavoidable events plant/equipment malfunctions in the site diary, rather than just actual complaints received. This will ensure that if complaints are received retrospectively from either the Council/EA or third parties, any circumstances which led to that complaint as a result of elements outside of the operator's control would be able to be attributed to the cause of the complaint.
- 5.1.4 It must be noted that the site lies adjacent to several activities with potential for noise generation, so in the event of a complaint, the operator will substantiate the complaint to identify whether the complaint is valid. If the complaint is valid, the site will implement the complaint procedures check and if required, amend site operations,

and provide additional attenuation around the site. This would typically involve using a level 2 sound meter and comparing this information from the background levels recorded from the recent Noise Impact Assessment.

5.1.5 If the source cannot be ascertained with 100% confidence, site management will either suspend or reduce the likely noise generating activities, i.e. mechanical treatment plant.

5.1.6 If the source is within the site's control, site management will take appropriate action to ensure the issue has been rectified. This may take the form of the following:

- a) Investigating the source to prevent a re-occurrence.
- b) Suspending operations which are giving rise to excessive noise due to potential plant malfunction
- c) Investigate noise mitigation measures
- d) Logging findings of a – c in the site diary / complaints form and also in the reporting template within the EP.
- e) Report actions to the complainant and/or EA within 24 hours.
- f) If following the above complaints are still received, the site will cease operations until the issues have been rectified.

5.1.7 The EA will be notified by email of any third-party noise complaints received within 24 hours including the complainant and the outcome of the investigation. Where complaints are substantiated as causing or likely to cause significant noise pollution, then the EA will be notified.

5.2 Complaints Recording

5.2.1 Any complaints received in relation to noise and vibration will be recorded on the form shown in Appendix II. This form will normally be completed, signed and dated by site management. If they are not available, this will be completed by another suitably trained staff member.

5.2.2 The following details as a minimum will be completed on the form:

- a) The name, address and telephone number of the caller will be requested.
- b) Each complaint will be given a reference number.
- c) The caller will be asked to give details of:
 - the nature of the complaint;
 - the time;
 - how long it lasted;
 - how often it occurs;
 - is this the first time the problem has been noticed; and,
 - what prompted them to complain.
- d) The person completing the form will then, if possible, make a note of:
 - the weather conditions at the time of the problem (rain snow fog etc.)
 - strength and direction of the wind; and,
 - the activity on the installation at the time the noise, dust or odour was detected, particularly anything unusual.
- e) The reason for the complaint will be investigated and a note of the findings added to the report.
- f) The caller will then be contacted with an explanation of the source of the complaint if identified and the action taken to prevent a recurrence of the problem in future.
- g) If the caller is unhappy about the outcome or unwilling to identify themselves the caller will be referred to the appropriate department of the EA or Local Council.
- h) Following any complaint, the complaints procedure will be reviewed to see if any changes are required or if new procedures need to be put in place.

6 Training

6.1 Training Regime

- 6.1.1 All employees and sub-contractors of Kaug Refinery Services Limited involved with potentially noisy operations will receive training in noise and vibration monitoring and complaint reporting.
- 6.1.2 Training will be given to all relevant persons to make sure they are competent in completing noise and vibration survey forms, noise and vibration complaint report forms and the site diary to ensure sufficient monitoring of noise and vibration can be carried out and any problems addressed correctly.
- 6.1.3 When selecting new plant and equipment, consideration shall be given to the need to meet all legislation and statutory guidance on noise levels and to minimise levels of noise from selected equipment.

6.2 Vehicle / Plant Preventative Maintenance Training

- 6.2.1 This training is provided specifically for the vehicle and plant operators in order to ensure that all plant and machinery is checked regularly to prevent any occurrences which may lead to any adverse impacts on the environment or human health.
- 6.2.2 Training will be based on the preventative maintenance schedule supplied by the plant/equipment manufacturer.
- 6.2.3 The same training will be provided to senior management enabling a dual-level maintenance programme.

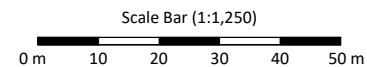
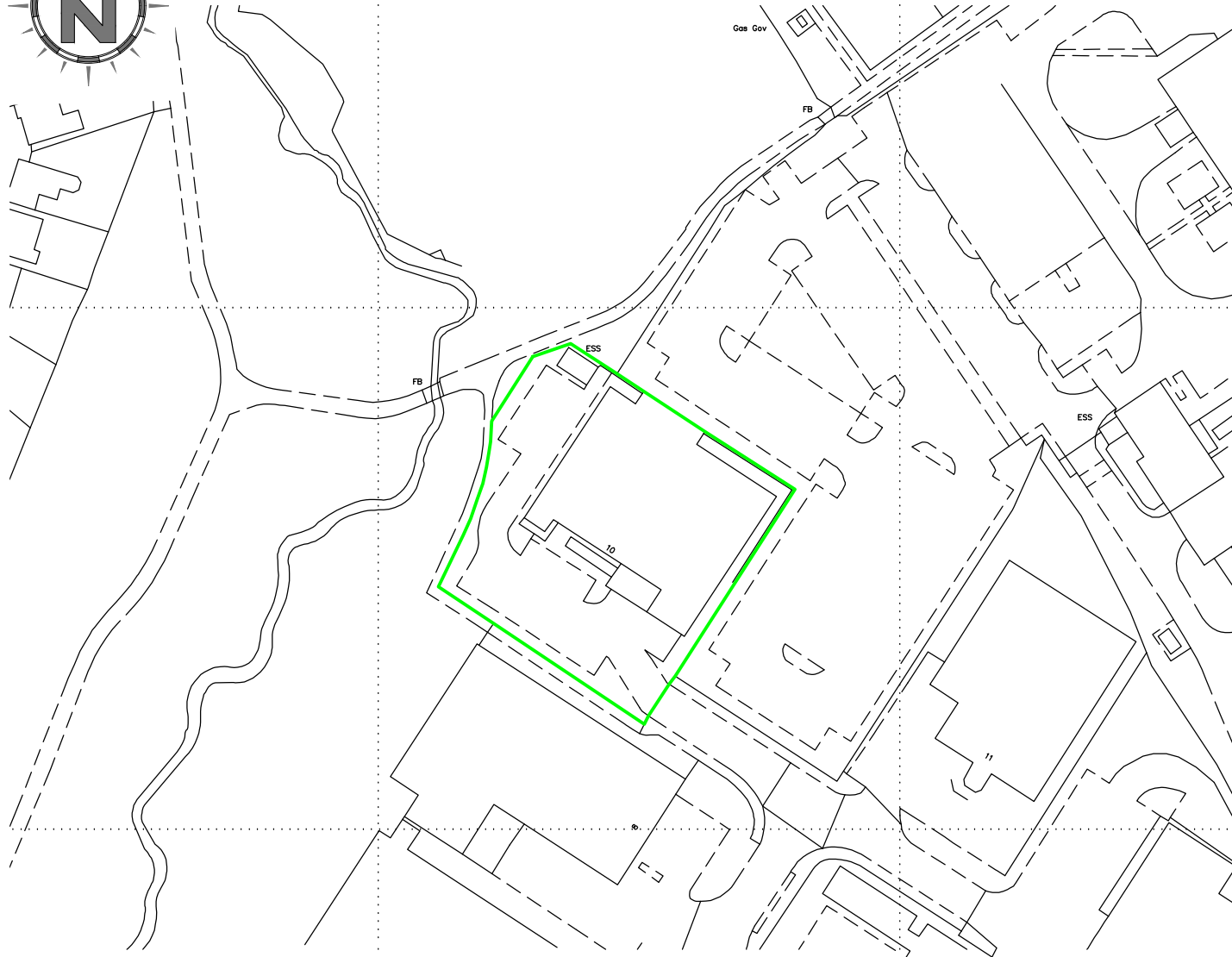
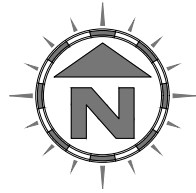
6.3 Liaison with Neighbours

- 6.3.1 In the extreme event of a significant, but temporary, increase in noise and vibration from the site, neighbours will be contacted to advise them of the occurrence and action being taken to remediate the issue on site.

- 6.3.2 An open-door policy will be encouraged by the operator to enable any complaints from neighbouring premises (if received) to be dealt with immediately. The complainant will then be supplied with remedial actions taken and any procedures or measures put in place by the operator to reduce or ideally eradicate the likelihood of a subsequent complaint.

Appendix I

Drawings



NOTES

Drawing for indication only. Reproduced with the permission of the controller of H.M.S.O. Crown copyright licence No. 100022432. This drawing is copyright and property of Oaktree Environmental Ltd.

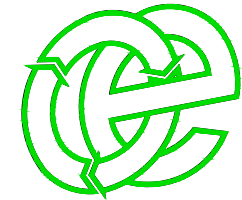
REVISION HISTORY

Rev:	Date:	Init:	Description:
-	05.12.22	JH	Initial drawing
A	05.01.23	IA	Address update
B	17.04.23	IA	Drawing title change

KEY:

— EP Permit boundary

Oaktree Environmental Ltd
Waste, Planning and Environmental Consultants



DRAWING TITLE
EP PERMIT BOUNDARY PLAN

CLIENT
Kaug Refinery Services Ltd

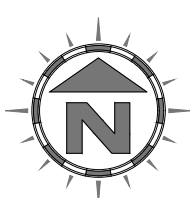
PROJECT/SITE
10 Merse Road, North Moons Moat, Redditch,
B98 9HL

SCALE @ A4	CLIENT NO	JOB NO
1:1,250	2765	010

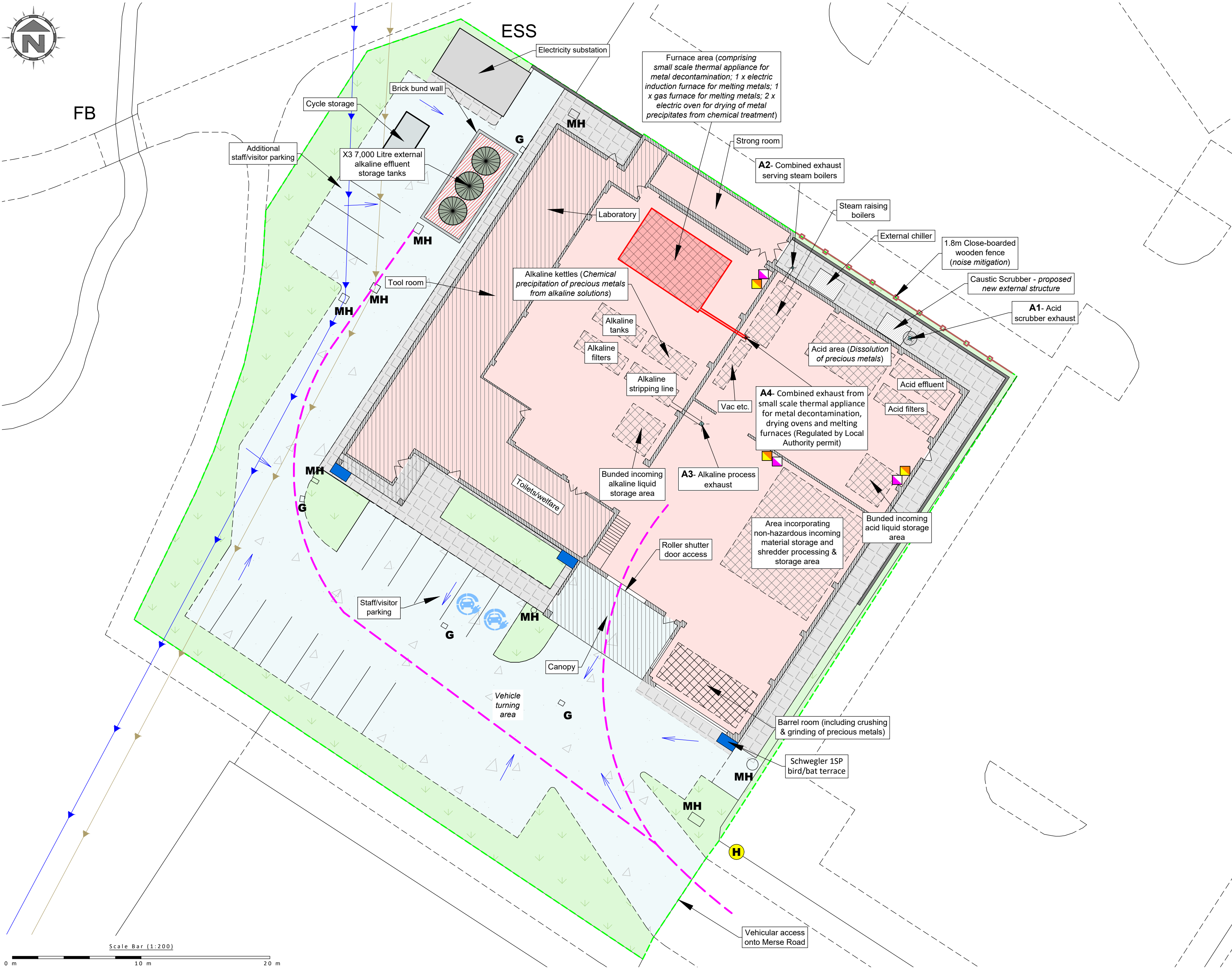
DRAWING NUMBER	REV	STATUS
2765-010-02	B	Issued

DRAWN BY	CHECKED	DATE
JH/IA	RS	17.04.23

Lime House, Road Two, Winsford, Cheshire, CW7 3QZ
t: 01606 558833 | e: sales@oaktree-environmental.co.uk



FB

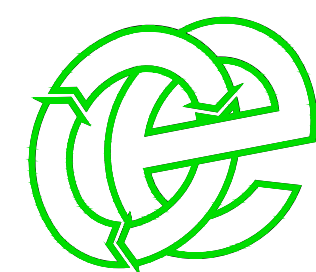


NOTES
Site survey undertaken using Intel Falcon 8+ drone in September 2022. Ordnance Survey data reproduced with the permission of the controller of H.M.S.O. Crown copyright licence No. 100022432. This drawing is copyright and property of Oaktree Environmental Ltd.

REVISION HISTORY			
Rev:	Date:	Init:	Description:
-	05.12.22	JH	Initial drawing
A	15.12.22	IA/JH	Drawing amendments
B	05.01.23	IA	Address update
C	22.03.23	IA	Layout changes
D	17.04.23	IA	Drawing amendments
E	04.05.23	IA	EA comments
F	28.07.23	IA	Drawing amendments
G	22.01.24	IA	Application resubmission

- KEY:**
- Waste EP Permit boundary (regulated by Environment Agency)
 - Part B Permit boundary (regulated by Local Authority)
 - Sealed buildings
 - Concreted areas
 - Spill kit
 - Firefighting equipment
 - Access routes for emergency vehicles
 - Hydrant
 - Manhole
 - Gully
 - Fall direction arrows
 - Paved areas
 - Un-surfaced areas

Oaktree Environmental Ltd
Waste, Planning and Environmental Consultants



DRAWING TITLE		
SITE LAYOUT PLAN		
CLIENT		
Kaug Refinery Services Ltd		
PROJECT/SITE		
10 Merse Road, North Moons Moat, Redditch, B98 9HL		
SCALE @ A2	CLIENT NO	JOB NO
1:200	2765	010
DRAWING NUMBER	REV	STATUS
2765-010-03	G	Issued
DRAWN BY	CHECKED	DATE
JH/IA	RS/DY	22.01.24
Lime House, Road Two, Winsford, Cheshire, CW7 3QZ t: 01606 558833 e: sales@oaktree-environmental.co.uk		

Appendix II

Complaints Report Form

COMPLAINTS PROCEDURE

- 1) Any complaints received in relation to noise and vibration will be recorded on the form below. This form will normally be completed, signed and dated by the site operator, if they are not available, the Office Manager will complete the form.
- 2) The name, address and telephone number of the caller will be requested.
- 3) Each complaint will be given a reference number.
- 4) The caller will be asked to give details of:
 - the nature of the complaint;
 - the time;
 - how long it lasted;
 - how often it occurs;
 - is this the first time the problem has been noticed; and,
 - what prompted them to complain.
- 5) The person completing the form will then, if possible, make a note of:
 - the weather conditions at the time of the problem (rain snow fog etc.)
 - strength and direction of the wind; and,
 - the activity on the site at the time the noise was detected, particularly anything unusual.
- 6) The reason for the complaint will be investigated and a note of the findings added to the report.
- 7) The caller will then be contacted with an explanation of the source of the complaint if identified and the action taken to prevent a recurrence of the problem in future.
- 8) If the caller is unhappy about the outcome or unwilling to identify themselves the caller will be referred to the EA.
- 9) Following any complaint the complaints procedure will be reviewed to see if any changes are required or if new procedures need to be put in place.

Complaints Report Form	
Date Recorded	Reference Number
Name and address of caller	
Telephone number of caller	
Time and Date of call	
Nature of complaint (noise, vibration) (date, time, duration)	
Weather at the time of complaint (rain, snow, fog, etc.)	
Wind (strength, direction)	
Any other complaints relating to this report	
Any other relevant information	
Potential reasons for complaint	
The operations being carried out on site at the time of the complaint	
Follow Up	
Actions taken	
Date of call back to complainant	
Summary of call back conversation	
Recommendations	
Change in procedures	
Changes to Noise & Vibration Management Plan	
Date changes implemented	
Form completed by	
Signed	
Date completed	