NOISE & VIBRATION MANAGEMENT PLAN

Marlow, High Road, Thornwood Common, Epping, Essex, CM16 6LU

D Evans & Sons

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Client No:	2616	**Job No:**	006		

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Document History:

Version	Issue date	Author	Checked	Description
1.0	09/08/2024	JU	JC	Initial draft
1.1	14/11/2024	JU	IA	Document issue

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1 Introduction

1.1 Site history / background

1.1.1 Oaktree Environmental Ltd have been instructed by D Evans & Sons to prepare a Noise & Vibration Management Plan (NVMP) which will outline the methods by which D Evans & Sons will assess and minimise the potential impacts of noise generated through the operation of the site situated at Marlow, High Road, Thornwood Common, Epping, Essex, CM16 6LU. This NVMP and subsequent NIA have been produced upon request by the Environment Agency to accompany the below variation to the permit.

1.1.2 D Evans & Sons currently hold and operate an Environmental Permit (EP) for the following activities:

- Physical treatment of non-hazardous waste (referenced as 1.16.12 of the EPR charging tables).

1.1.3 As part of this variation the operator seeks to:

- Remove the restriction on waste/product storage awaiting disposal or recovery in bays/containers as detailed in Condition 1.1.1, Table 1.1 and Condition 2.1 of the existing permit, allowing the operator to store and treat the wastes/product/materials awaiting disposal or recovery in external free-standing stockpiles without the aforementioned containment; (the operator will implement the dust mitigation measures within an EMS, DEMP and the ERA which forms part of this application); discussions with the EA have confirmed that existing permit conditions will be revised and updated with modern conditions, and,
- Allow for the external storage/treatment of IBAA aggregate.
- Addition of crushing treatment activity.
- Retain current waste codes listed in the EP with the addition of codes listed within the SR2010 No.12. A full list of the existing and proposed codes are detailed in table 2.1 of the NTS which comprises existing codes and table 2.2 of the NTS which comprises proposed codes with existing codes highlighted in green

1.1.4 As part of the NVMP an assessment with regards to the onsite activities as per BS4142:2014+A1:2019 has been undertaken. Relevant findings of the assessments are incorporated into the management plan.

1.1.5 The plan addresses the impact of noise and the specific control measures required to mitigate the risk. These mitigation measures will be put in place by the management of D Evans & Sons.

1.1.6 The location of the site is shown in Drawing No. 2616-003-03 provided within Appendix I and all references to 'the site' in this statement shall mean the land within the proposed permit boundary.

1.1.7 The mitigation measures outlined in this NVMP will be put in place by the management of D Evans & Sons to ensure noise and vibration is controlled to ensure the receptors listed in Section 3.1 are not affected by the above proposals.

1.1.8 Contact details for Oaktree Environmental are as follows:

Oaktree Environmental Ltd	Contact:	Joshua Ulyatt
Lime House	Position:	Consultant
2, Road Two	Tel:	01606 558833
Winsford Industrial Estate	Fax:	01606 861182
Winsford CW7 3QZ	E-mail:	josh@oaktree-environmental.co.uk

1.2 Site location

1.1.1 The site is located just off High Road to the west just north of Thornwood the small town located in Essex. The site has been operating under the existing permit and waste management license since 2005. The site is situated in a predominantly agricultural setting with some residential properties located south in Thornwood town and to the north just off Upland Road. The site is approximately 1km away from the M11 road network with the AKM Airport being located 1.2km southeast of the site.

1.3 Hours of operation

1.1.2 The site will be open during the following hours for the delivery and receipt of waste on site; including depositing, sorting, moving, storing and removing waste:

Monday to Friday	07:00 – 18:30
Saturday	07:00 – 13:30
Sundays, Bank/Public holidays	Closed

1.1.3 During times where the site is closed or not in operation, the site will be locked and secured to prevent unauthorised vehicular or pedestrian access.

2 Sensitive Receptors

2.1 List of receptors

2.1.1 The nearest noise sensitive receptor is detailed in Table 1 below with approximate distances to receptors from the centre of the site. Any receptors that >500m are not included based as the distance is considered too great to account for being a sensitive receptor.

Table 1 - Distances to Selected, Representative Sensitive Locations

Boundary (direction from)	Receptor	Receptor type	Approximate distance from centre of site (m)
South	Thornwood Common Flood Meadow (LNR)	Ecological	>350
South	Epping Forest (SSSI)	Ecological	>650
Southeast	Protected Species (Great crested newt)	Ecological	800
North	Deciduous Woodland	Ecological	Adjacent
South	Thornwood Springs Trout Fishery	Ecological/ Recreational	>250
East	Residential properties on High Road and beyond	Residential	>180
North	Residential properties on Upland Road and beyond	Residential	>180
South	Nearest commercial land use (i.e. Camfaud)	Industrial/ Commercial	>70
South	Proposed Residential properties south of Camfaud	Residential	>115
Northeast	Texaco	Commercial	>140
Northeast	Elmcroft Guest House	Recreational/ Commercial	>220
West	Upper Clapton Football Club and Rugby Ground	Recreational/ Commercial	Adjacent

2.1.2 For full details of the existing noise level at these locations as well as a subjective assessment of the existing noise climate, reference should be made to the accompanying NIA.

2.2 Additional noise sources

2.2.1 The site is located within an established industrial estate with numerous surrounding commercial/industrial uses. Other land uses which will contribute to the background noise level are tabulated below in Table 2.

Table 2 - Other Noise Emitting Operators

Company	Address	Type of Business	Approximate distance from site boundary (m)
Camfaud	High Road, Epping, CM16 6LU	Concrete Contractor	30m south
Texaco	Harlow Road, Thornwood Common, Thornwood, Epping, CM16 6LZ	Petrol Station	149m north
Farm buildings	Located adjacent to the Elmcroft House	Agricultural	314m north east

2.2.2 Other noise emitting sources within the vicinity of the site include the B1393 road bordering the site to the east and Upland Road approximately 200m north of the sites border.

3 Existing Noise Climate and Background Levels

3.1 Introduction

3.1.1 A comprehensive Noise Impact Assessment (NIA) has been undertaken by Oaktree Environmental.

3.1.2 The assessment was based on the guidance provided within BS4142:2014+A1:2019 and includes the calculation of noise levels arising a result of the operation of the site via the construction of noise models using CadnaA. The rating level was then compared to the background noise levels measured within the vicinity of the nearest noise sensitive receptors.

3.1.3 Full reference should be made to the NIA for details of the assessment including scope and methodology. In addition, the report makes specific recommendations with regards to noise controls which have been incorporated into this management plan.

3.2 Noise survey

3.2.1 An unattended background noise was completed by NOVA Acoustics Ltd over the course of several days including weekday and weekend in accordance with BS 7445-1:2003. Unattended measurements were considered more appropriate in order to gather as much representative data.

3.2.2 The monitoring locations were chosen as there're dwellings located south, northeast and north of the site. With nearest residential property being at NMP 1 located northeast.

3.2.3 The measurement locations are shown in Figure 1, below:

Figure 1- Site location and noise monitoring positions

3.2.4 Unattended measurements were undertaken in order to produce a daytime (07:00-23:00) and nighttime (23:00-07:00) model and have a complete data set for weekday and weekend operations. The results of the survey are shown in the Noise Impact Assessment (NIA) which will be sent in conjunction with this report.

4 Noise Management and Controls

4.1 Noise Sensitive Receptors

4.1.1 As discussed previously, the site lies within an industrial setting with the nearest noise sensitive residential receptors located as shown in Table 1.

4.1.2 The proposed operation and 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.

4.1.3 The noise management plan is a working document with the specific aim to ensure that:

- Noise impact is considered as part of routine inspections.
- Noise is primarily controlled at source by good operational practices and 'Best Available Techniques 'BAT', including physical and management control measures,
- All appropriate measures are taken to prevent or, where that is not reasonably practical, to reduce noise emissions from the site.

4.1.4 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 noise sources are highlighted in Table 11 of the subsequent NIA. The predominant noise sources affecting the NSRs highlighted in Figure 1 above include the operation of the screening and crushing plant, with additional source contribution to those NSRs arising from the use of the excavator and street sweeper.

4.3 Noise Management Controls

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 4 will be used in the event that 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)	Consequences	Probability of noise disturbance	Remedial Action/ Recommendations/ Comments	Assessment Outcome following actions / recommendations
Small vehicles travelling to and from the site (e.g. staff and visitor's cars, courier van deliveries etc.)	As detailed in Section 2.1	Noise pollution	Low	All those working on and visiting the site to be made aware of the need for considerate driving and keeping vehicles well maintained. Small vehicles will arrive marginally earlier than the main site operating hours.	Very Low / Negligible
Maneuvering of mobile plant around external areas of thew site (Street sweepers, Dump Trucks excavators).	As detailed in Section 2.1	Noise pollution	Low	Ensure the location of the plant remained within the center of the site whilst operating to ensure distance from the source to the receptor remained equal. The addition of the Lego concrete block walls will provide additional mitigation for all NSRs mentioned in Figure 1 above. The ground at the site will be maintained in a good state of repair to prevent unnecessary noise being generated. Implementation of a 5mph (8km/hr) speed limit on site. All drivers are required to enter and exit the site with due consideration for neighbors i.e. no engine revving, shouting or playing loud radios. All mobile plant on site and other vehicle including the dump trucks, excavators etc. will benefit from white noise reversing alarms. A no idling policy will be in place and staff/third party drivers be told not to rev engines. Drop heights will be a maximum of 1m from the ground to allow for clearance of the relevant vehicle. Management will ensure that all site vehicles operated by D Evans & Sons are functioning suitable i.e. vehicles must be well maintained and operated with silencers and moving parts to be regularly lubricated.	Low

Source(s)	Receptor(s)	Consequences	Probability of noise disturbance	Remedial Action/ Recommendations/ Comments	Assessment Outcome following actions / recommendations
Operation of the Screening and crushing externally	As detailed in Section 2.1	Noise pollution	Medium	The operation of the screener and crusher on site will be operating with a lego block barrier along the northern perimeter of the site which provides attenuation to those most affected NSRs located north and east. The placement of the screener and crusher will be within the approximate center of the site and therefore no closer to any of the receptors (NMP 1-4). Operatives will be informed to turn off engines of the mobile plant when it is not in use and no revving of engines will be permitted at the site. Any malfunctions in the plant, i.e. missing screws/bolts which result in excessive noise will be de-commissioned until an alternative loading plant sourced. Plant will typically be loaded using the dumper trucks on site.	
Repairs	As detailed in Section 2.1	Noise pollution	Low	If repairs to the site are required, the work is to be undertaken with due regard for the possible noise nuisance and during daylight hours. In the event of major repair work being undertaken which is likely to cause significant noise and disruption, neighboring residents and the EA will be notified in advance.	Very Low / Negligible

4.4 Operating Monitoring Plan

4.4.1 Monitoring of noise emissions from the site will be undertaken subjectively.

4.4.2 **Assessment** - Site management i.e. The site manager, compliance manager or TCM will subjectively monitor noise levels in and around the entire site perimeter throughout the day. Should it be deemed necessary by site management, monitoring using an appropriate at least Type 2 Sound Level Meter will be carried out at intervals while the site is operational should it be observed that unacceptable levels of noise are being emitted from the site.

4.4.3 The results of monitoring exercises and any remedial action taken will be entered into the site's diary or logbook which is available for the EA to inspect upon request. The name of the inspector will be stated in the site's diary / inspection form for each day of operation.

4.4.4 Should the monitoring conclude that a certain activity is giving rise to noise which is causing unacceptable impacts, steps will be made to reduce the impact of this activity and will be agreed with the EA prior to commencement.

4.4.5 Site management will be suitably trained to carry out these duties and delegate to operational staff. Further information regarding training and technical competence is provided within the site's EMS.

4.5 Monitoring

4.5.1 Operational staff will continuously monitor noise emissions whilst plant is in operation and will control noise levels using the procedures listed above, asking site management for advice as required. Work procedures will be stopped/adjusted should it be evident significant noise is being generated which has the potential to cause annoyance.

4.5.2 Site management will also be required to make a note of any unavoidable events such as plant failure, in the site diary, rather than just actual complaints received. 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.

4.6 Management control measures

4.6.1 User of on-site plant and equipment complete daily defect log at the beginning of the working day if they observe that the plant is not working to its optimum. An onsite mechanic actions the defect log on the same working day and machines are not used until this action has been completed.

4.6.2 Tool-box talks are provided by site management on a regular basis to the site operatives. These talks include all aspects of the management plans for this site. Defects are reported and actions are taken to rectify the problem or remove the offending item from the service until such time as the issue is resolved.

4.6.3 All documentation relating to plant and equipment maintenance is retained in the site office for inspection.

4.7 Emergencies

4.7.1 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 will be to reduce any noise impacts.

5 Actions when complaints are received

5.1 Complaints procedure

5.1.1 If any noise complaints are received, the relevant operator will complete a 'complaints and events log' and detailed individually on the complaints form (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 The operator would also be required to 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.

5.1.3 It must be noted that the site lies adjacent to several industrial uses, so in the event of a complaint, the operator will substantiate the complaint by carrying out noise monitoring 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.

5.1.4 If the source cannot be ascertained with 100% confidence, site management will either suspend or reduce the likely noise generating activities.

5.1.5 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:

i) Investigating the source to prevent a re-occurrence.
ii) Suspending operations which are not being conducted using best-practice controls.
iii) Investigate noise mitigation measures

iv) Logging findings of i – iii in the site diary / complaints form and also in the reporting template within the EP.

5.2 Key responsibilities

5.2.1 The table below outlines the key responsibilities and the staff member responsible for each task.

Table 3 - Key Responsibilities

Task	Staff position responsible
Noise monitoring and ongoing assessment	Site manager + operative
Vehicle maintenance	Specialist contractor
Overseeing of deliveries	Site manager + operative

6 Training

6.1 Training regime

6.1.1 All employees and sub-contractors of D Evans & Sons 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 All failed/broken plant and equipment will be replaced with equivalents that produce equal or lower levels of noise. This will be verified with manufacturers technical datasheets or on-site measurements.

6.2.2 All plant and machinery will be regularly and properly maintained in accordance with the preventative maintenance schedule of which the appropriate staff will be trained in.

6.2.3 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.

6.2.4 Training will be based on the preventative maintenance schedule supplied by the plant/equipment manufacturer.

6.2.5 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.

7 Conclusion

7.1 Summary & Recommendations

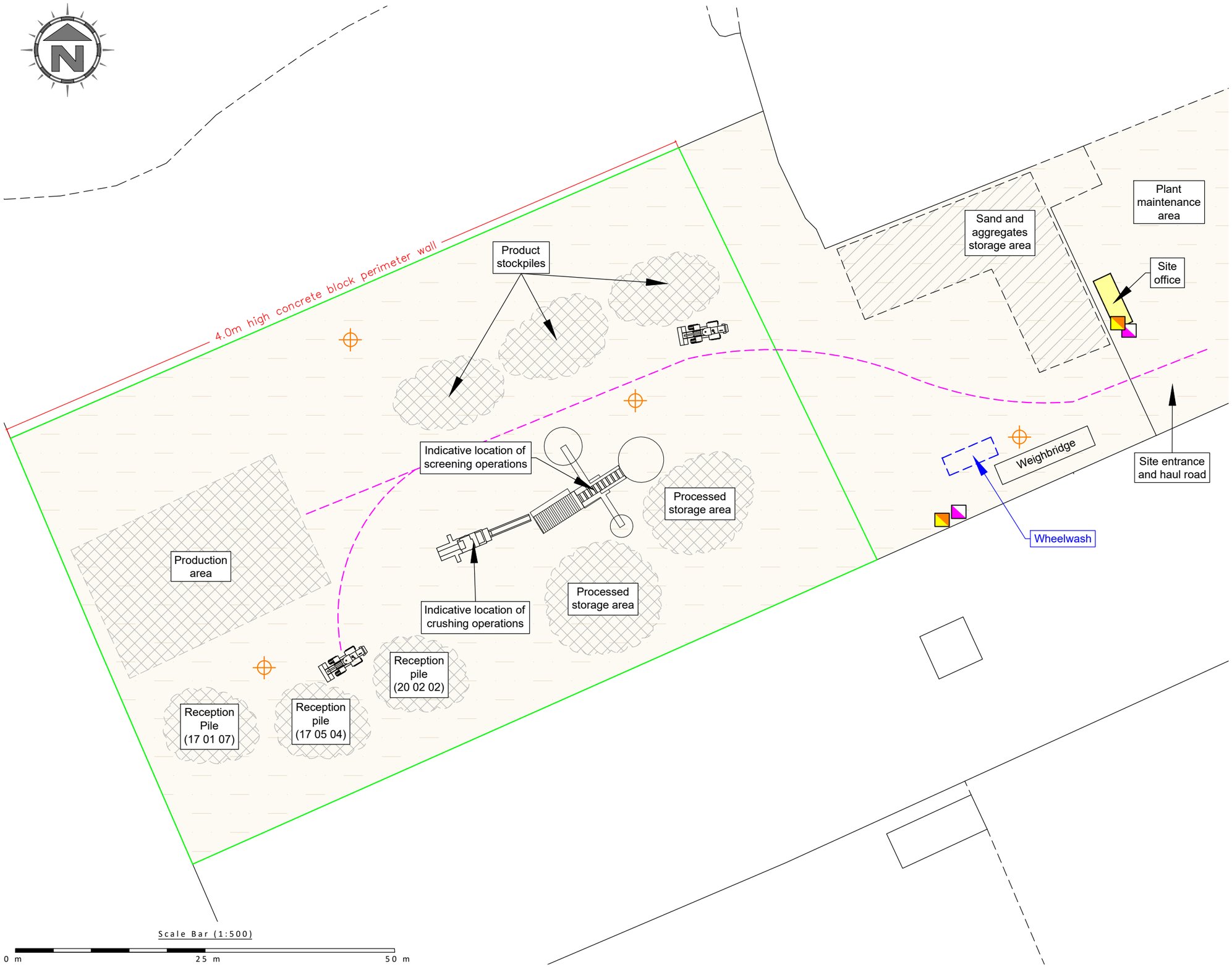
7.1.1 Oaktree Environmental Ltd has undertaken a NVMP including a full noise impact assessment in line with BS4142: 2014+A1:2019 for the proposed activities to take place at the site which is located at Marlow, High Road, Thornwood Common, Epping, Essex, CM16 6LU.

7.1.2 A noise measurement survey has been undertaken by Oaktree Environmental. A worst-case scenario comparison has been made with the noise levels associated with the proposed activities/existing activities on site which includes a worst-case hour where all plant and machinery are operating in combination. With this in mind it is highly unlikely that all operations on site will be operating in combination as some of the site's operations are dependent on the others. It must be noted that regardless of the variation to the permit changes listed above in Section 1.1.3 the site is permit to undertake the existing operations which are detailed in the modelling and the NIA which will be sent in conjunction with this report as part of the permit variation application.

7.1.3 The assessment with regards to onsite activities reveals a likely adverse impact for the comparison of the predicted rating level against the existing background level for the daytime results at MP3 weekend results. However, based on the control measures mentioned in this report and again in Section 6.0 of the NIA the resultant impact on those NSRs is deemed to be acceptable.

Appendix I

Drawings



NOTES

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REVISION HISTORY

Rev:	Date:	Init:	Description:
-	11.05.22	IA	Initial drawing
A	27.07.22	IA	Client comments
B	08.09.22	IA	EA comments
C	26.09.24	IA	Layout amendments

KEY:

- Permit boundary
- Hardstanding surfaces (free-draining)
- Storage areas
- Spill kit, absorbent pads, booms, granules etc..
- Firefighting equipment
- Indicative dust monitoring locations
- Site access and haul routes

Oaktree Environmental Ltd
Waste, Planning and Environmental Consultants

DRAWING TITLE
SITE LAYOUT PLAN

CLIENT
D Evans & Sons

PROJECT/SITE
Land at Marlow, High Road, Thornwood, Epping, CM16 6LU

SCALE @ A3	CLIENT NO	JOB NO
1:500	2616	005

DRAWING NUMBER	REV	STATUS
2616-005-03	C	Issued

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IA	KLX	26.09.24

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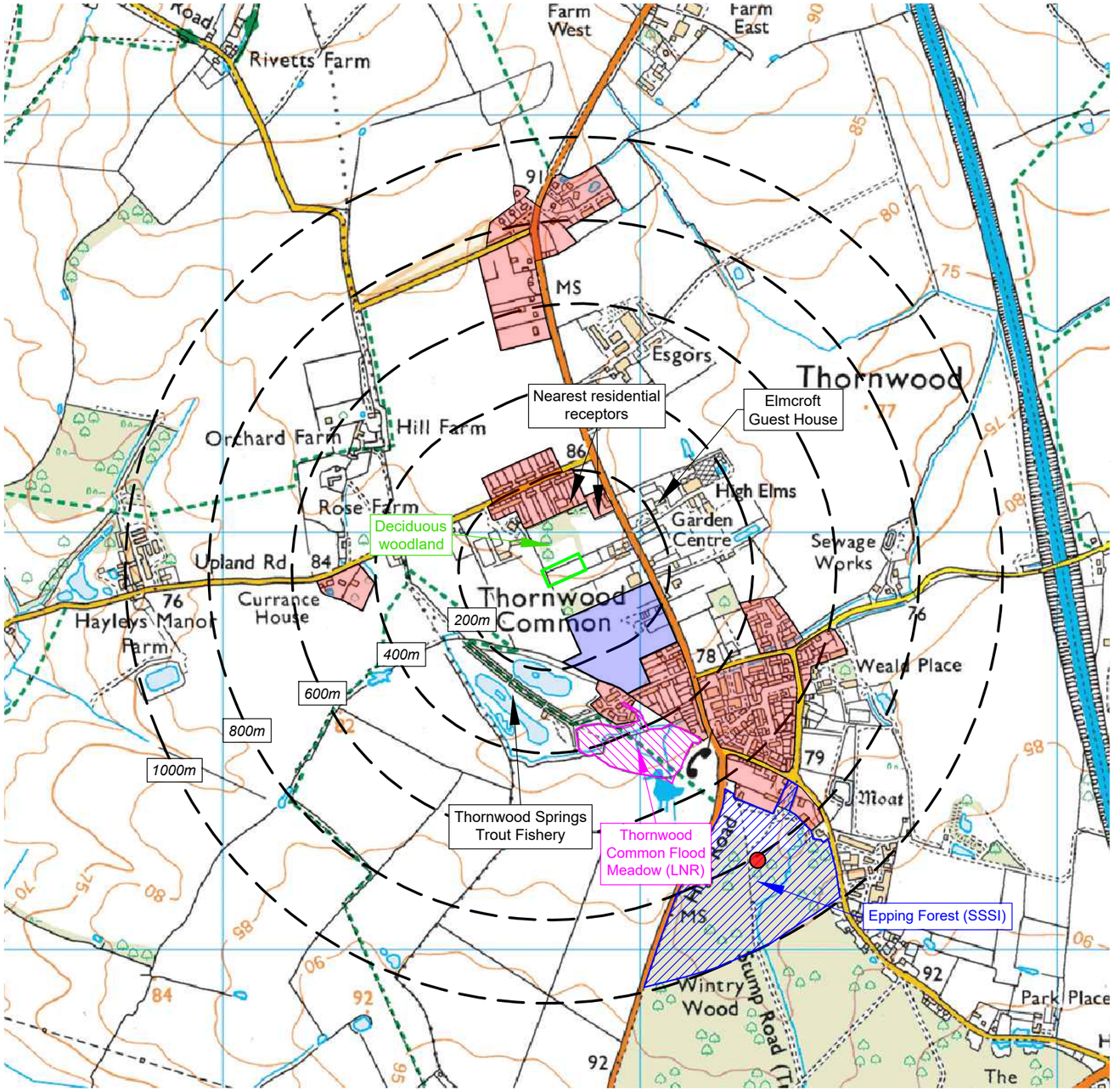
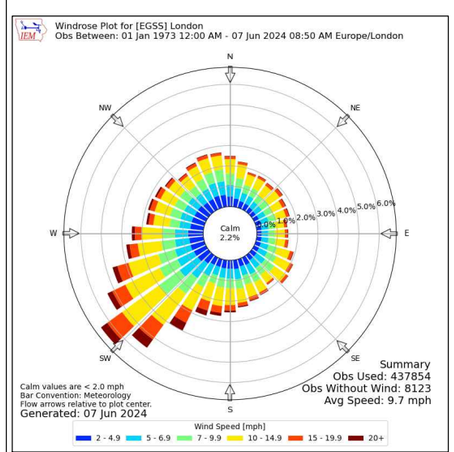
KEY:

- Permit boundary
- Main River
- Surface water body (river / stream / pond / pool / lake)
- Workplaces (includes agriculture industry, commerce and retail)
- Areas with mix of residential, retail and commercial properties
- Residential blocks
- Class A roads
- Class B roads
- Class C roads
- Nearest fire hydrant
- Railway line
- School
- Woodland areas including Deciduous woodland
- Protected sites (Ramsar, SSSI, SPA, SAC)
- Nature reserves
- Approximate location of housing development (EPF/0332/22)
- Indicative location of Protected Species (Great Crested Newt)





Compass Wind Rose for London Stansted Airport (EGSS) Period 1973-2024
- source: Iowa State University

NOTES

1. Boundaries are shown indicatively.
2. Wind rose data shows the prevailing wind direction to be Southerly.

REVISION HISTORY

Rev:	Date:	Init:	Description:
-	03.09.24	IA	Initial drawing
A	12.11.24	IA	Amendments

Oaktree Environmental Ltd
Waste, Planning and Environmental Consultants

DRAWING TITLE
RECEPTOR PLAN

CLIENT
D Evans & Sons

PROJECT/SITE
Land at Marlow, High Road, Thornwood, Epping, CM16 6LU

SCALE @ A3	CLIENT NO	JOB NO
1:12,500	2616	005

DRAWING NUMBER	REV	STATUS
2616-005-04	A	Issued

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IA	KLX	12.11.24

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Appendix II

Complaints Procedure and Recording 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 Written Management System	
Date changes implemented	
Form completed by	
Signed	
Date completed	