Planning Statement:

Noise – Retail and Leisure

for

Edge Lane Central Retail Park, Liverpool

28th September 2010

Produced for
Derwent Holdings Ltd

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Contents

1.1 Project Introduction

Mouchel have been commissioned by DPP, acting on behalf of Derwent Holdings Ltd, to undertake a noise assessment to accompany a planning application to be submitted to Liverpool City Council associated with the proposed Edge Lane Central Retail and Leisure Development, at the site of the former Edge Lane Central Retail Park, Liverpool.

The retail scheme as proposed includes provision for the development of approximately 47 retail units, 4 restaurant units and 1 leisure building (housing 3 occupiers) on the site of the existing Edge Lane Central Retail Park and Rathbone Park public open space.

This Planning Statement document should be read in conjunction with the detailed acoustic technical report entitled "*Noise Assessment for a Proposed Retail and Leisure Development, Edge Lane, Liverpool*" produced by the acoustics department of Mouchel dated 24th September 2010 ref: 1025014/Noise/24-09-10/V004

1.2 Noise Assessment Methodology

Broadly the scope of the assessment methodology utilised includes the following key steps and stages:

- Baseline and ambient noise surveys in the vicinity of the development site;
- Quantitative/qualitative assessment of off site road traffic noise;
- 3-D acoustic modelling of operational retail and leisure associated noise levels; and
- Assessment in accordance with relevant legislation and guidance.

1.3 Standards and Guidance

The current guidance within the UK covering noise associated with developments such as this are listed below. For more detail relating to the specifics of each of these documents and standards please reference the associated Mouchel Technical Report.

- Planning Policy Guidance Note 24
- British Standard 4142:1997
- British Standard 8233 'Noise Reduction and Sound Insulation for Buildings – Code of Practice'.
- World Health Organisation 'Guidelines for Community Noise' and 'Night Noise Guidelines for Europe'
- BS 5228 'Code of practice for noise and vibration control on construction and open sites' 2009.
- The Design Manual for Roads and Bridges

1.4 Survey Details

Background and ambient noise levels were established on the 4th and 8th December 2009.

Measurements were undertaken at the following locations as agreed in advance with Liverpool City Council (LCC) Environmental Protection Unit.

Location 1 (National Grid Ref: SJ 38391 90762)
The meter was located at the pavement edge of Edge Lane next to a small brick wall, in front of ARC Car Wash, approximately 1.5m above ground.

Location 2 (National Grid Ref: SJ 38761 90843)
The sound level meter was located on Gidlow Rd, approximately 2m from the nearest façade and 1.5m above ground.

Location 3 (National Grid Ref: SJ 3842090807)
The sound level meter was located 1.5m above ground approximately 1m from the railway fence, approximately 2m behind the electrical sub station.

Location 4 (National Grid Ref: SJ 3849990382)
The sound level meter was located on soft ground in front of the industrial unit within the Wavertree Technology Park, approximately 1.5m above ground.

Location 5 (National Grid Ref: SJ 3888890578)
The sound level meter was located at the end of Runic Street approximately 1.5m above soft ground and 2m from a 1.8m brick wall, in line with the nearest façade.

Location 6 (National Grid Ref: SJ 3911690647)
The sound level meter was located approximately 1.5m above hard ground, in line with the nearest façade on the pavement next to Borax Rd. The meter was located 2m from the nearest façade.

All measurements were undertaken by suitably trained Mouchel acoustic consultants using appropriately calibrated Type 1 sound level meter equipment in acceptable weather conditions. Full details relating to the surveys undertaken, the calibration

certification for the sound level meter equipment used and the results of the survey are presented within Section 4 of the Mouchel Technical Report.

1.5 Noise Prediction

The aspects of the proposed site that will generate noise and therefore require assessing have been broken down into the following three main elements:

- Operational noise from the proposed site including deliveries/service yard noise and any fixed plant.
- Noise from the car park and patrons access roads.
- Noise levels from vehicles on the surrounding road network as a result of the development.

1.6 Noise from Fixed Plant (Air conditioning/refrigeration)

As discussed in detail within the associated technical report there is no available data relating to any fixed noise generating plant or equipment associated with the leisure or retail aspects of the development.

It is therefore suggested that noise emissions from these aspects of the development be controlled through a suitably worded planning condition. Further information relating to this is contained within Section 4.2.2 of the Mouchel technical report..

1.7 Cumulative On-Site Noise Assessment

As a result of the nature of the proposed development the noise generated at any one time will be as a function of all of the operations and activities being undertaken at that time. These cumulative levels include noise generated by HGV movements in the service yards, the car parks and cars accessing the car park on internal site roads

The noise contour plots within **Figures 2 to 4** depict this assessment for the weekday PM peak, Weekend Peak and overnight scenarios.

Table 1 : Operational Noise Levels – All on site noise as modelled

Noise Sensitive Receptor location	Period	Cumulative BS4142 "Specific Level" in dB(A)	Cumulative BS4142 "Rating Level" in dB(A)	Measured Background L_{A90} noise levels	'Rating 'Background Level' and BS4142 Conclusion
1	Weekday PM peak	45	45	65	-20
	Weekend Peak	47	47	65	-18
	Night-time	14	14	52	-38
2	Weekday PM peak	50	50	49	+1
	Weekend Peak	52	52	49	+3
	Night-time	9	9	38	-29
3	Weekday PM peak	41	41	59	-18
	Weekend Peak	45	45	59	-14
	Night-time	15	15	40	-25
4	Weekday PM peak	40	40	50	-10
	Weekend Peak	42	42	50	-8
	Night-time	Commercial property – Daytime assessment only			
5	Weekday PM peak	48	48	49	-1
	Weekend Peak	51	51	49	+2
	Night-time	38	38	43.	-5
6	Weekday PM peak	57	57	54	+3
	Weekend Peak	61	61	54	+7
	Night-time	30	30	49	-19

It can be seen from the table above that the BS4142 assessment indicates that noise as a result of the proposed development (from HGV movements in the service yards, car park and access roads) would be rated by the standard as:

Weekday PM Peak - between +3 above and -20 dB below the existing background noise climate of the area. This would be considered by the standard to be of "*less than marginal significance*" with the resulting potential for complaints being considered to be low.

With regard to the potential assessment result of +3dB(A), this occurs at location 6 which is representative of the properties along Rathbone Road. As a worst case the assessment location within the model has been placed at the front of the row of terraced properties (numbered 288 – 298 Rathbone Road) located directly opposite the leisure undercroft access road and as such it would be extremely difficult to reduce this assessment result any further. However, property numbers 288 – 298 front directly onto the pavement of Rathbone Road, and as such have no exposed external living space that would be significantly adversely affected.

Weekend Daytime Peak - between +7 above and -18 dB below the existing background noise climate of the area. This would be considered by the standard to be of less than to *"marginal significance*".

Again, as with the weekday PM peak, the +7dB(A) result is associated with the Leisure undercroft access road and there is no opportunity to screen these properties from the noise from this site road.

Overnight Operations - between -1 and -38 dB below the existing background noise climate of the area. This would be considered by the standard to be of "*less than marginal significance*" with the resulting potential for complaints being considered to be low.

1.7.1 Comparison to BS8233 Guidance Internal Noise Levels

Based upon the assumptions detailed within the Mouchel Technical report it is further demonstrated within Table 14 of said report that appropriate internal noise levels would also be achieved relative to the BS8233 design criteria. For ease of reference this information is reiterated within **Table 2** below. For information relating to the assumptions inherent within the data presented within Table 2 reference should be made to Section 5.1.4 of the Mouchel Technical report.

As detailed within Section 5.1.4 of said accompanying report the data presented within Column 2 of Table 2 below is as predicted at first floor height so as to be representative of potential upper floor bedroom windows. Therefore as the information presented within the Table 1 BS4142 assessment relates to ground floor

levels direct comparison of the predicted levels within the two tables for the night-time period would not be possible.

Table 2 : BS8233 Assessment

Location/Period	Façade corrected Predicted External noise Level in dB (Predicted L_{Aeq} + 3dB(A))	Predicted Internal noise level in dB L_{Aeq}	BS8233 'Good/Reasonable' Conditions in dB L_{Aeq}
1 Night-time	20	7	30 "Good"
2 Night-time	15	2	30 "Good"
3 Night-time	20	7	30 "Good"
4 Night-time	Not considered sensitive overnight due to usage.		
5 Night-time	48	35	35 "Reasonable"
6 Night-time	34	21	30 "Good"

* Location 4 represents existing commercial operations as such night-time levels are not appropriate

As demonstrated within **Table 2** above it can be seen that the proposed development would not result in upper floor internal noise levels in breach of the 'Reasonable' criteria of 35dB(A) from within BS8233, and in most cases can be seen to be below the 'Good' design range criteria level of 30dB(A).

1.8 Noise from Vehicles on Surrounding Roads

Based on the 2020 peak hour (AM, PM and Weekend) traffic information supplied by Sanderson Associates Consulting Engineers the percentage increase in traffic on a number of most affected routes around the site has been calculated based upon the methodology of CRTN.

The results of this assessment are presented in detail within Table 20 of the Mouchel Technical report which accompanies this planning statement. These results are summarised below referenced to roads with highly sensitive (residential etc) receptors and those with Low sensitivity (industrial, commercial) receptors:

Roads with High Sensitivity Receptors – All less than 32% equating to an approximately 1dB(A) or less increase in traffic noise

Roads with no high sensitivity receptors (only Low Sensitivity Receptors) – some very large increases along main access roads of up to 1044% equating to up to an approximately 10.6dB(A) increase

It is concluded that with regard to routes running through high sensitivity areas and uses the predicted increase in noise levels as a result of road traffic generated by the proposed Edge Lane Central Retail and Leisure Park would be of **Negligible** to **Minor** in nature. Impacts of **Moderate** to **Major** could be experienced along certain

other routes being used for site access purposes, but this level of increase would not occur on any links adjacent to noise sensitive properties or land uses.

1.9 Existing Noise Sources

It is also important to note that the area surrounding the proposed development site contains a number of existing industrial/commercial type operations akin to the development proposed. Therefore, noise sensitive receptors in the area, such as those selected and considered within the scope of this assessment, are already exposed to noise of an industrial/commercial nature including HGV movements and plant noise within the current noise climate of the area.

It is therefore unlikely that the operation of the proposed development would impact significantly on the existing noise 'character' of the area. As such the subjective impacts of any noise generated by operations within the proposed development site are likely to be reduced by a masking effect of the existing noise climate.

1.10 Mitigation Measures

In order to ensure that operations associated with the proposed Retail and Leisure operations do not result in undue noise impacts the following mitigation measures would require to be implemented within the scope of the design of the site:

- It has been assumed that the construction specifications of the external building envelopes of the retail, leisure and industrial units would be such designed to ensure that noise generated within is, as far as practicable, entirely contained.

- There has been assumed to be a "no idling" policy with regard to delivery HGV's on any aspect of the development enforced within the tenancies of each of the units within the development;

- The service yards have been assumed to be surrounded by an acoustic fence/robust brick built wall structure of no less than 3.0m in height. The location of the fencing is presented on the noise maps within Figure 5;

- An acoustic barrier (fence/robust brick built wall/landscaped bund structure) of no less than 2.5m effective height above the surface of the road leading into the Leisure facility undercroft car park would be required . The location of the barrier is presented on the noise maps within Figure 5;

- The acoustic fence/robust brick built wall to the rear of the service yard associated with the industrial operations to the north of Edge Lane (former Halfords site) would require to be to a height of 3.0m with a no idling policy in place with the operators;

- All fixed mechanical air conditioning/refrigeration plant has been assumed to be adequately acoustically controlled at source to ensure that it would not

unduly impact on the existing noise climate of the area as detailed within **Section 5.2.2** of the Mouchel Technical Report.

- The Industrial operations to the North of Edge Lane would be suitably designed and specified such to ensure that noise would not cause undue impacts on any adjacent residential properties as detailed within **Section 5.2.3** of the Mouchel Technical Report.

1.11 Conclusions

A noise model has been created to predict the likely level of noise incident on sensitive receptors close to the site due to the operation of key aspects of the proposed development (HGV movements in service yards, car parks and car access). In addition changes in noise level on surrounding roads have been predicted based on supplied pre and post development 2020 peak hour traffic flow information.

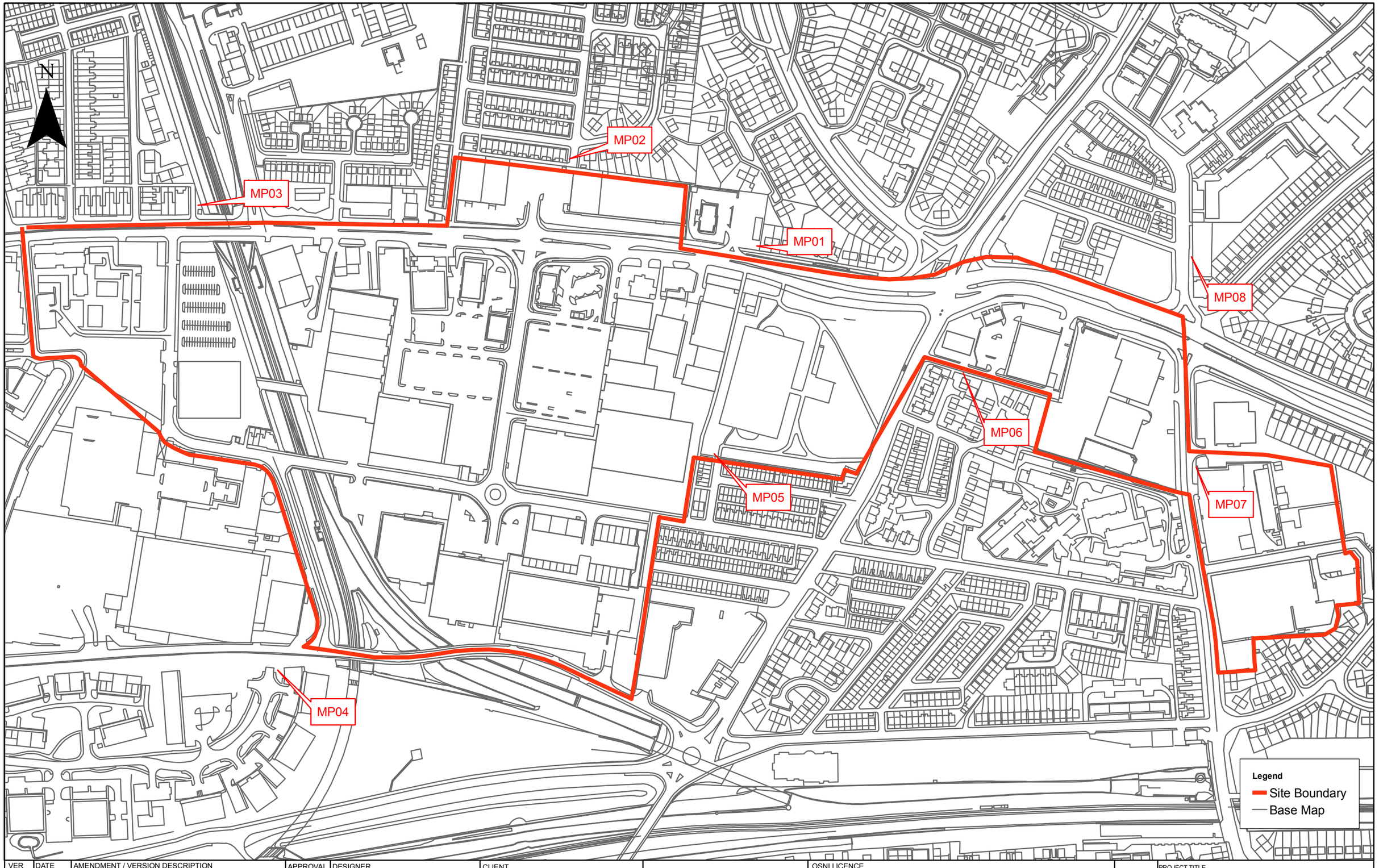
When assessed in accordance with BS4142 'Method for Rating Industrial Noise Affecting mixed Residential and Industrial Areas' It has been found that noise would be expected to be of less than to '*marginal significance*' at all assessed noise sensitive receptors and the assessment does not indicate that complaints, as a result of the operation of the proposed development, would generally be likely to occur. However, in order to achieve this some level of inherent noise mitigation is necessary as detailed within **Section 1.10** of this report.

Increases in traffic noise on roads close to the site have been assessed against the values stated in the Highways Agency 'Design Manual for Roads and Bridges' document. It has been found that a number of the main routes assessed in the vicinity of the development site would exhibit impacts of **Moderate** to **Major** as a result of the scheme. However, these routes are shown (as detailed in Table 20 of the Mouchel technical report) to be located within industrial and commercial areas which would not be considered to be significantly sensitive to noise (Low sensitivity). With regard to routes located within close proximity to residential and other sensitive receptor locations, impacts along these links are shown to be of **Negligible** to **Minor** in nature.

Based upon the scope of the assessment undertaken, the conclusion has been drawn that due to the noise climate around the proposed site, it is not believed that noise generated by the proposed mixed use retail and leisure park development will be significantly out of 'character' for the area or result in significant negative impacts relating to noise.

Figures

Figure 1 – Noise Monitoring Locations



VER	DATE	AMENDMENT / VERSION DESCRIPTION	APPROVAL
		0 0.015 0.03 0.06 Miles	
A	30/11/09	Noise Monitoring Location Plan	PT

DESIGNER: mouchel

CLIENT

OSNI LICENCE

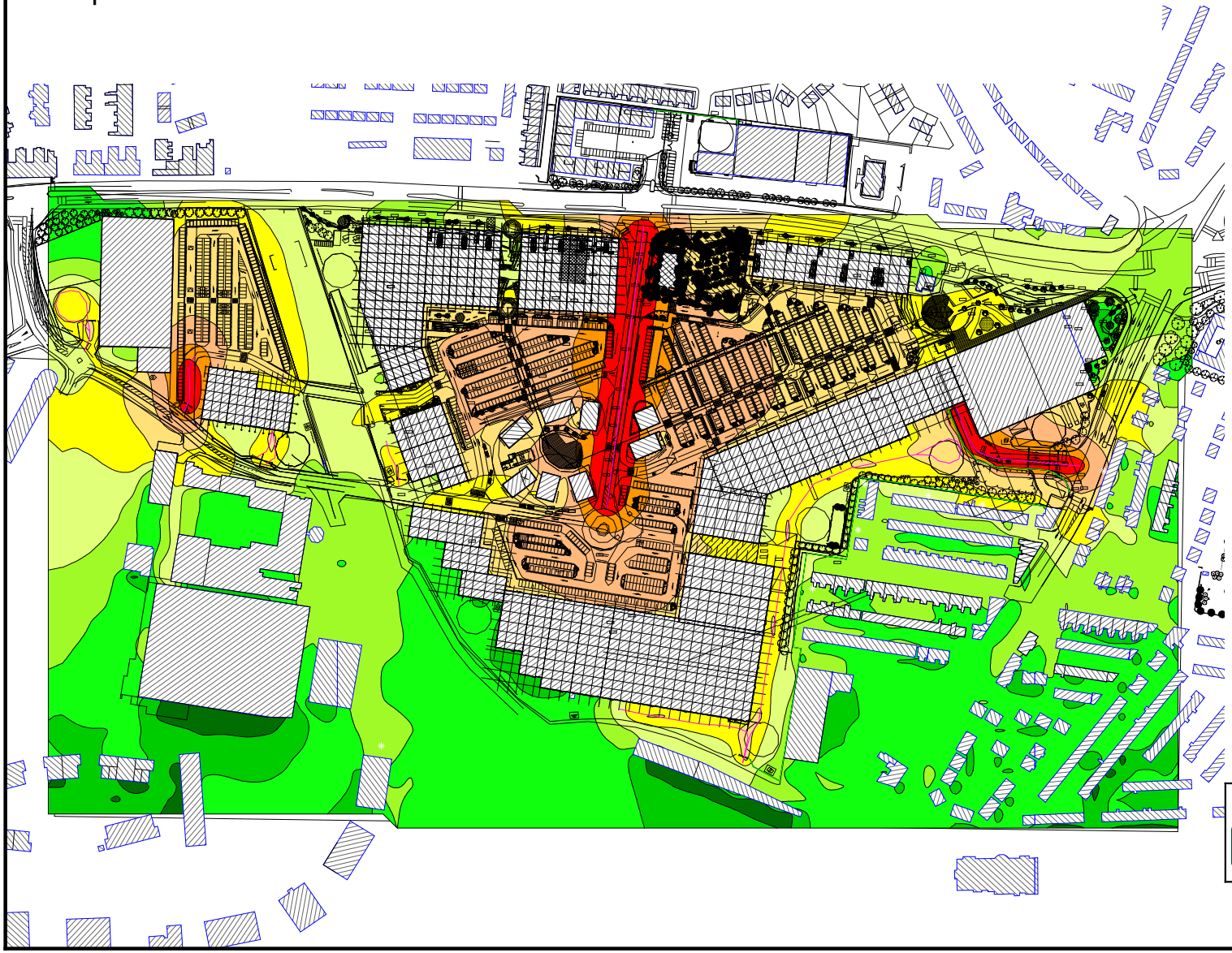
PROJECT TITLE	Edge Lane West Retail Park
DESIGNED BY: PT	DRAWING TITLE: Noise Monitoring Location Plan
DRAWN BY: MH	
CHECKED BY: PT	1025014-Fig 1
SCALE AT A3: N/A	PURPOSE OF ISSUE: INFORMATION
	VERSION: A

Figure 2 – Daytime Grid Noise Map – Weekday PM Peak

1025014 - Edge Lane Central Retail and Leisure Park

Noise contour plot showing the predicted noise levels based upon the weekday PM peak traffic data

Figure 2



Predicted Noise levels
$L_{Aeq,1hour}$ dB

	< 30
30 <=	< 35
35 <=	< 40
40 <=	< 45
45 <=	< 50
50 <=	< 55
55 <=	< 60
60 <=	< 65
65 <=	< 70
70 <=	

N

Signs and symbols

- Main building
- Point
- Parking lot
- Line source
- Base line
- Wall

Date - 28th September 2010
Produced by - Mark Harrison

Length Scale 1:4400

0 20 40 80 120 160 m

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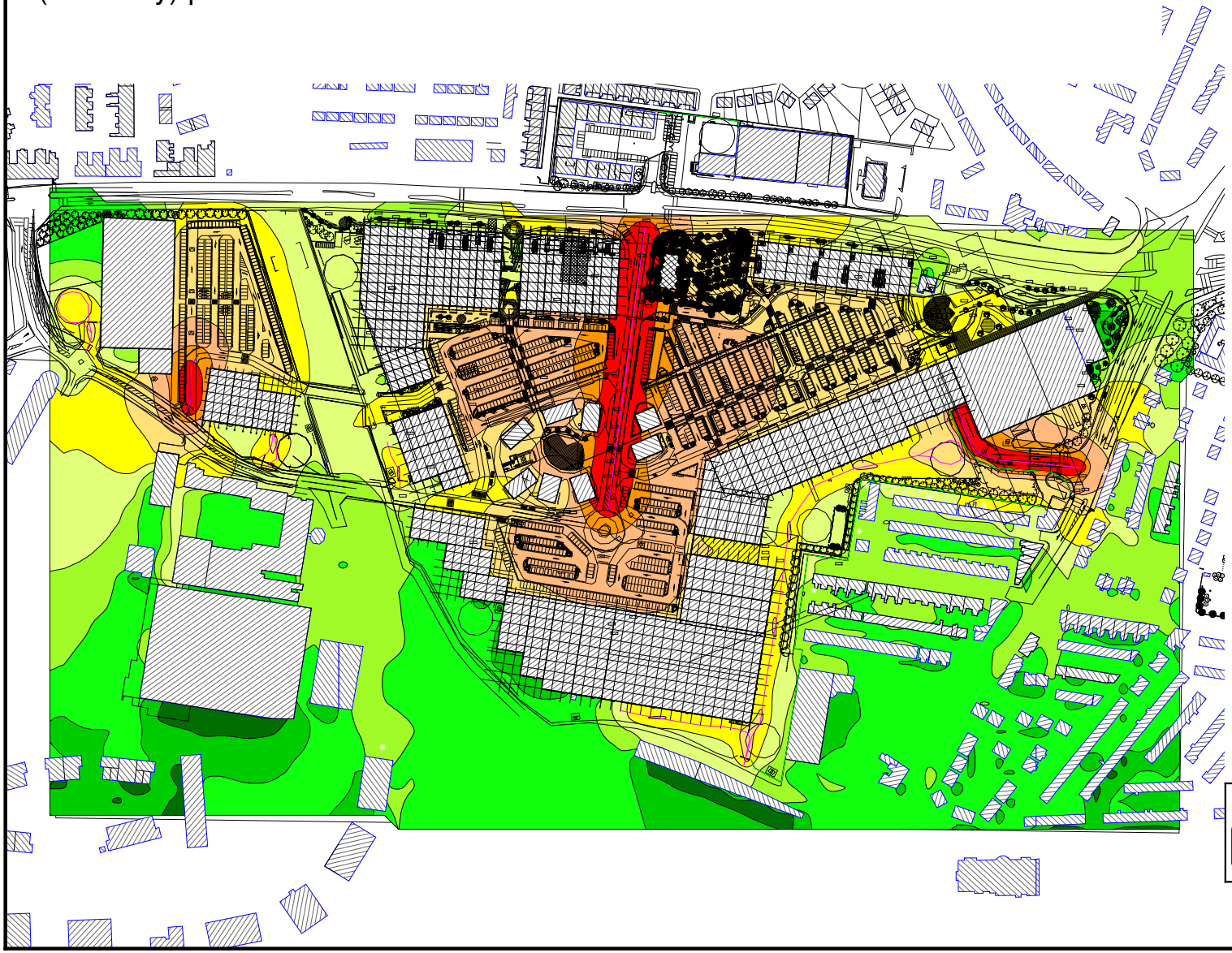
Figure 3 – Daytime Grid Noise Map – Weekend (Saturday) Peak

1025014 - Edge Lane Central Retail and Leisure Park

Noise contour plot showing the predicted noise levels based upon the weekend (Saturday) peak traffic data

Figure 3



Predicted Noise levels
$L_{Aeq,1hour}$ dB

	< 30
30 <=	< 35
35 <=	< 40
40 <=	< 45
45 <=	< 50
50 <=	< 55
55 <=	< 60
60 <=	< 65
65 <=	< 70
70 <=	

N

Signs and symbols

- Main building
- Point
- Parking lot
- Line source
- Base line
- Wall

Date - 28th September 2010
Produced by - Mark Harrison

Length Scale 1:4400

0 20 40 80 120 160 m

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Figure 4 – Night-time Grid Noise Map – HGV movements only

1025014 - Edge Lane Central Retail and Leisure Park

Noise contour plot showing the predicted night-time noise levels based upon usage of the various service yards

Figure 4

Predicted Noise levels
$L_{Aeq,5min}$ dB

	< 30
30 <=	< 35
35 <=	< 40
40 <=	< 45
45 <=	< 50
50 <=	< 55
55 <=	< 60
60 <=	< 65
65 <=	< 70
70 <=	

N

Signs and symbols

- Main building
- Point
- Parking lot
- Line source
- Base line
- Wall

Date - 28th September 2010
Produced by - Mark Harrison

Length Scale 1:4400

0 20 40 80 120 160 m

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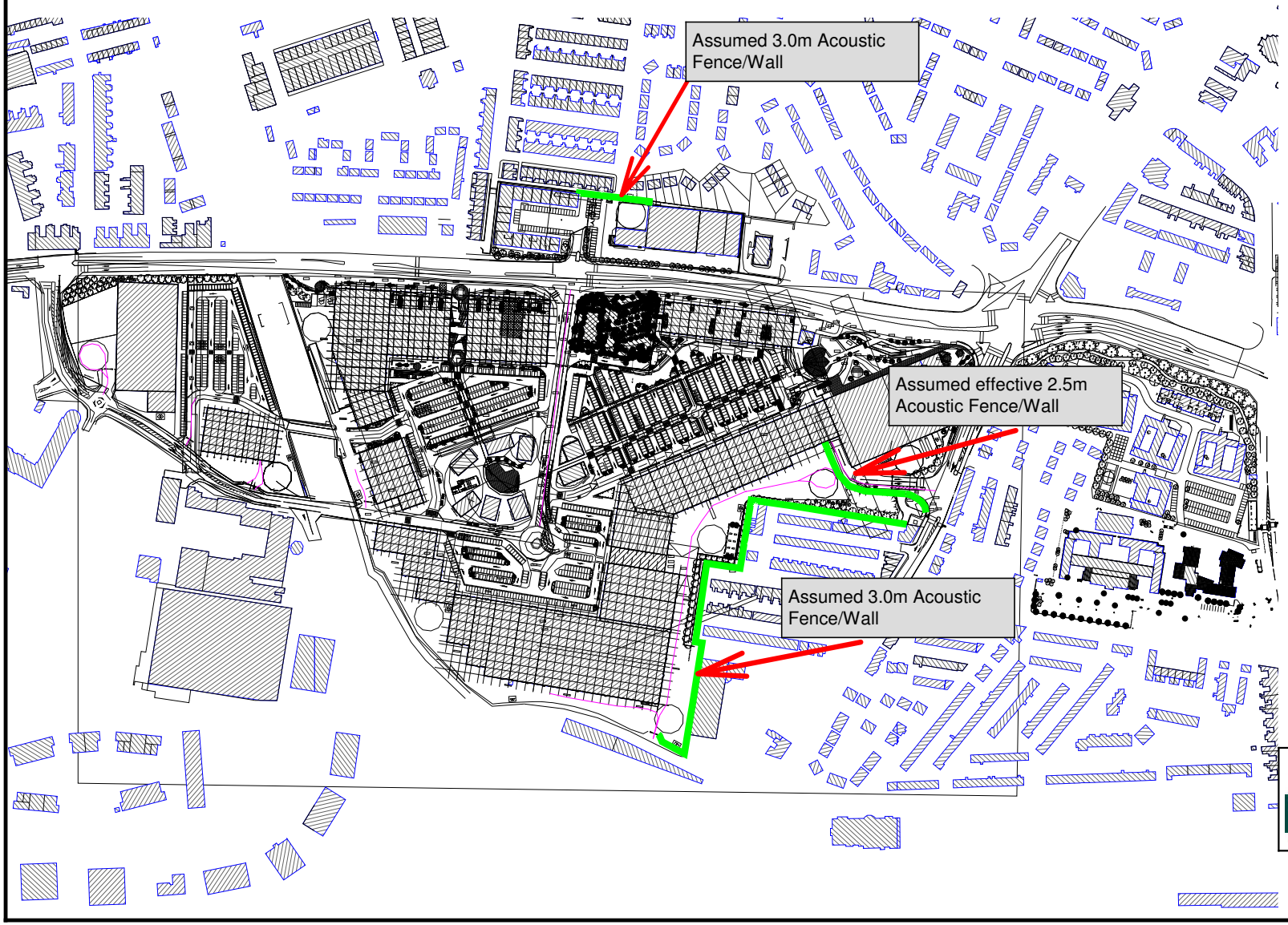
Figure 5 – Noise mitigation measures – Fencing/Walls

1025014 - Edge Lane Central Retail and Leisure Park

Noise Mitigation Provision within the scope of the Development

Figure 5



N

Signs and symbols

- Main building
- Point
- Parking lot
- Line source
- Base line
- Wall

Date - 12th December 2009
Produced by - Peter Tallantyre

Length Scale 1:5200

0 25 50 100 150 200 m

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