Hann Tucker Associates
Consultants in Acoustics Noise & Vibration
Duke House 1-2 Duke Street Woking Surrey GU21 5BA
(t) +44 (0) 1483 770595
(e) enquiries@hanntucker.co.uk
(w) hanntucker.co.uk

Directors:
Stuart G Morgan CEng MIMechE MCIBSE FIOA (Chairman)
Simon R Hancock BEng(Hons) CEng MCIBSE FIOA (Managing)
John L Gibbs MIOA(D) MSEE CEnv
John R Ridpath BSc(Hons) MIOA
Andrew D Fermer BSc(Hons) MIOA
Andrew G Jameson BSc(Hons) MIOA

Associates:
Adam Kershaw BSc(Hons) MIOA
Gareth Evans BSc(Hons) MIOA

Our Ref: HT: 23195/GDR

8 February 2016

Dorchester Living
Heyford Park
Camp Road
OX25 5HD

By email only at:
Simon Fry <S.Fry@dorchestergrp.com>

Dear Simon

RE: HEYFORD PARK, PARAGON CAR WASH

Further to email dated 18 January 2017, please find below our assessment of the proposed acoustic fence at the above location.

1.0 Introduction

An acoustic barrier is proposed to be installed at Heyford Park between Paragon Car Wash and nearby residential dwellings in order to protect the amenity of the residents.

We have therefore been instructed to undertake a noise assessment using 3D noise mapping software to assess the suitability of the proposed acoustic barrier.

2.0 Criteria

2.1 Local Authority Planning Conditions

We understand that Cherwell District Council have outlined the following condition in relation to noise:

Condition 33. "*For each phase or sub phase of the development, no works shall be undertaken until such times as a detailed scheme of noise assessment and possible sound insulation measures for the residential units (including a timetable for its implementation) has first been submitted to and approved in writing by the Local Planning Authority. That scheme shall be implemented in accordance with the approved details."*

2.2 Proposed Criteria

We understand from correspondence with Dorchester Group that the barrier should aim to reduce the car wash noise level at the nearest residential window by at least 10 dBA.

3.0 Noise Impact Assessment

3.1 Barrier Assessment

A 3D noise model has been created to determine the performance of the proposed barrier.

Noise levels of the car wash used within the 3D model are based on our manned noise measurements undertaken on 09 May 2016, and shown in our report Ref, 23195/NIA1 dated 10 June 2016.

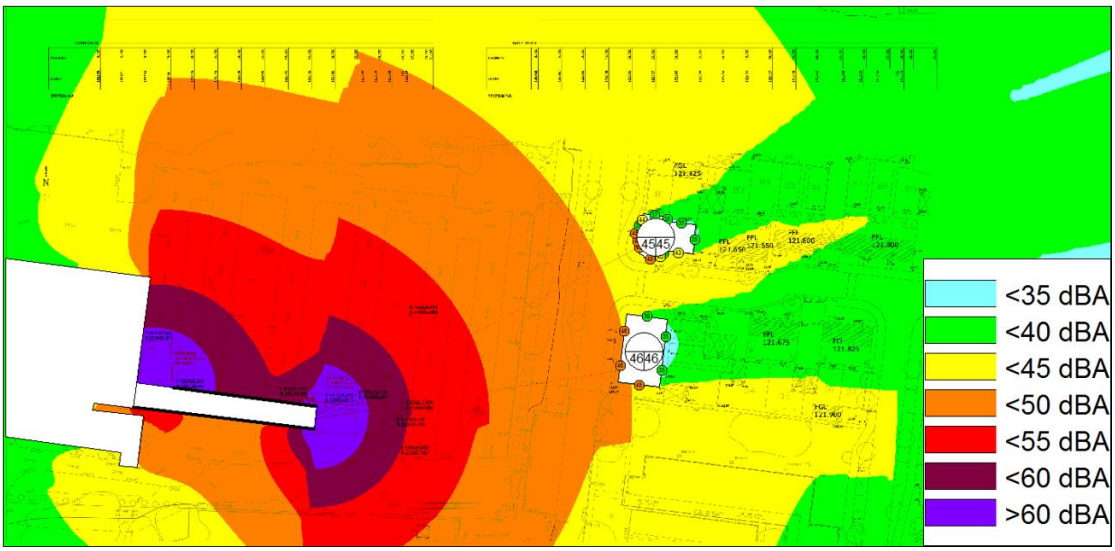
3.1.1 Barrier Height and Positioning

The barrier height and positioning has been based on sketch “HEYF-5-K307 A” provided by Dorchester Group. Email correspondence has determined that the barrier should be at least 0.5 metres higher than shown in sketch “HEYF-5-K307 A” and should be extended to achieve the proposed criteria. See image below for barrier locations and nearest sensitive residential dwellings.

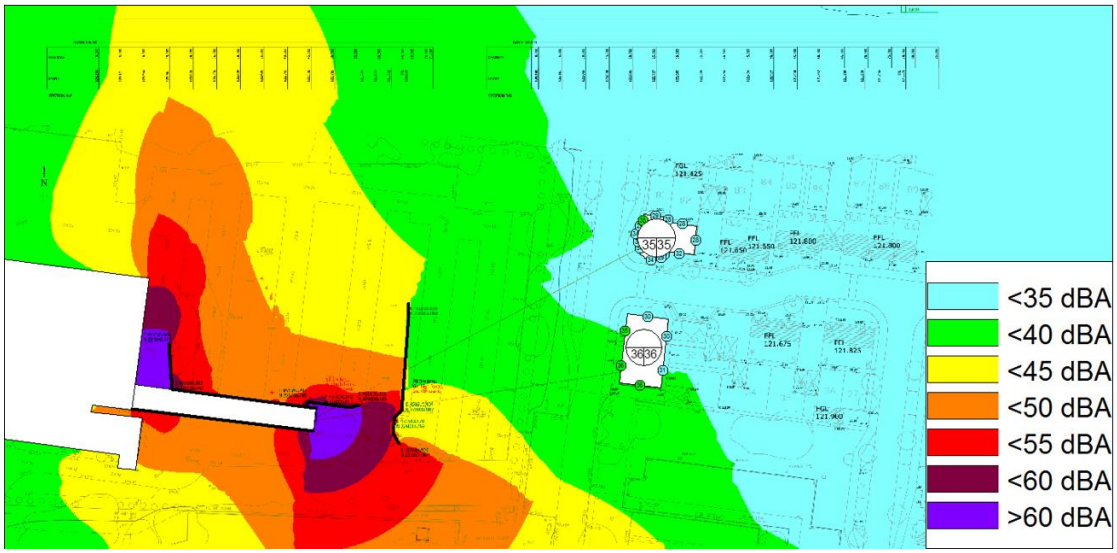
Image showing barrier locations and nearest sensitive residential dwellings (Woods Hardwick)

3.1.2 CadnaA 3D Noise Model

The following images show the car wash noise at the nearest residential windows with and without the proposed noise barrier.



Noise map of Heyford Park, Paragon Car Was without a noise barrier (CadnaA)



Noise map of Heyford Park, Paragon Car Was with the proposed noise barrier (CadnaA)

4.0 Discussion

The noise models in Section 3.0 show Heyford Park, Paragon Car Wash with and without the proposed acoustic barrier. The nearest residential dwellings have been modelled and evaluated.

The model indicates that at the nearest residential dwellings, the car wash noise level should be mitigated by at least 10 dBA with the introduction of the barrier.

5.0 Conclusion

We have undertaken a noise assessment using 3D noise mapping software to assess the suitability of the proposed noise barrier.

The model indicates that at the nearest residential dwellings, the car wash noise level should be mitigated by at least 10 dBA with the introduction of the barrier.

We trust the above to be clear and of assistance. Please do not hesitate to contact us with any other queries.

Yours sincerely

Giovanni De Rienzo
for HANN TUCKER ASSOCIATES