

**Car Park Extension
Costain House
1500 Aviator Way
Manchester**

Sound Assessment Report
0716/SAR1

28 September 2020

For:

Ocarian
26 New Street
St Helier
Jersey
JE2 3RA



2nd Floor 3 Hardman Square
Spinningfields Manchester M3 3EB

☎ 0161 457 0515 ■ 07415 151 901
✉ Enquiry@LighthouseAcoustics.co.uk
🌐 www.LighthouseAcoustics.co.uk

Sound Assessment Report

0716/SAR1

Contents	Page
1.0 Introduction	1
2.0 Objectives	1
3.0 Site Description	1
4.0 Local Authority Requirements	2
5.0 Environmental Sound Survey	2
6.0 BS 4142:2014	5
7.0 Car Park Sound Assessment	6
8.0 Conclusions	11

Appendices

Car Park Sound Detailed Calculations

This report (including any enclosures and attachments) has been prepared by Lighthouse Acoustics with all reasonable skill and care in accordance with generally accepted acoustic principles and the terms agreed between Lighthouse Acoustics and our Client. Any information provided by third parties and referred to herein may not have been checked or verified by Lighthouse Acoustics unless expressly stated otherwise. This document contains confidential information and no part of this report should be reproduced, distributed or communicated to any third party unless Lighthouse Acoustics provide express prior written consent. We do not accept any liability if this report is used for an alternative purpose from which it is intended, nor to any third party in respect of this report.

Lighthouse Acoustics is the trading name of Lighthouse Enterprises UK Limited
Registered Office: 2nd Floor 3 Hardman Square Spinningfields Manchester M3 3EB
Registered in England and Wales Company No. 09085491

1.0 Introduction

Lighthouse Acoustics has been appointed by Ocarian to undertake a sound survey at the existing Costain House, 1500 Aviator Way, Manchester, and to undertake a car park sound assessment for the proposed car park extension.

The survey methodology, results, assessments and proposals are presented in this report.

2.0 Objectives

To establish the Local Authority's acoustic requirements for the proposed car park extension.

To visit site to undertake a detailed environmental sound survey in order to establish existing environmental sound levels at the proposed development.

To undertake an assessment of vehicle sound from the proposed car park extension to the nearest noise sensitive receptors.

To assess the calculated sound levels and provide comments on the acceptability in terms of achieving the requirements of the Local Authority.

To propose mitigation measures if required in order to achieve the requirements of the Local Authority.

3.0 Site Description

The proposed car park extension is at the existing Costain House, 1500 Aviator Way, Manchester. The existing site comprises Costain House, a 3 storey detached office building and Emirates House, a 2 storey office building. Both buildings are surrounded by a ground level car park comprising a total of ???No. spaces.

The site is bound by residential properties to the north and east, Aviator Way to the south and grassland to the west.

Ringway Road West (A555) is situated approximately 50m to the south of the site whilst a train line is situated approximately 100m to the south of the site. Manchester Airport is situated approximately 150 to the south of the site.

The site plan overleaf indicates the extent of the site and the surrounding environment.



Site plan indicating the extent of the site and the surrounding environment

4.0 Local Authority Requirements

Manchester City Council have requested that an acoustic assessment is undertaken for the proposed car park extension.

Sound from the proposed car park extension is therefore assessed in accordance with BS 4142: 2014, "Methods for rating and assessing industrial and commercial sound" to the nearest noise sensitive receptors.

5.0 Environmental Sound Survey

5.1 Measurements

The site was attended between 09:30 and 10:00 hours on Thursday 20 August 2020 and between 10:00 and 10:30 hours on Friday 21 August 2020. During these periods, the location of the various sound sources was established.

In order to obtain comprehensive measurements of environmental sound, automated sound measurements were undertaken from 10:00 hours on Thursday 20 August 2020 to 10:00 hours on Friday 21 August 2020. During this period the L_{Amax} , L_{Aeq} and L_{A90} sound pressure levels were measured continuously over 15 minute periods.

5.2 Weather Conditions

At the start of the survey period there was a gentle southerly breeze (<5m/s) and the sky was overcast. There was no rainfall and road surfaces were dry. The temperature was approximately 19°C.

At the end of the survey period there was a gentle southerly breeze (<5m/s) and the sky was overcast. There was no rainfall and road surfaces were dry. The temperature was approximately 18°C.

Based on publicly available weather data for the survey period we understand that weather conditions remained similar for the duration of the survey with no significant periods of rainfall or strong breezes. The weather conditions during the survey period are therefore considered to be suitable for undertaking measurements of sound levels.

5.3 Measurement Position

Environmental sound levels were measured at a single position on-site as described in the table below.

Position	Description
A	Microphone situated towards the northern site boundary at 1.2m above ground level in free field conditions.

The measurement position is shown on the site plan below.



Site plan showing measurement position

The measurement position was selected in order to assess typical environmental sound levels incident upon the nearest noise sensitive receptors.

5.4 Equipment

The following equipment was used to undertake the environmental sound survey.

Equipment	Manufacturer	Model	Serial No.	Calibration Date
Class 1 Sound Level Meter	Casella	633C	5262813	07/06/2019
Preamplifier	Casella	495	003391	07/06/2019
Microphone	Casella	251	1031	07/06/2019
Class 1 Sound Calibrator	Casella	120/1	3864878	15/11/2019

Field calibration checks were performed on the sound level meter prior to and on completion of the survey and were found to be within acceptable tolerance limits.

5.5 Results

5.5.1 Time History Graph

The results of the environmental sound survey are presented on Time History Graph 0716/THG1 enclosed at the rear of the report.

5.5.2 $LA_{90,T}$ Background Sound Levels

The lowest representative morning and afternoon $LA_{90,15min}$ background sound levels measured during the survey period in the absence of existing car park movements are detailed in the table below.

Position	Lowest Representative $LA_{90,15min}$ Background Sound Levels (dB)	
	Morning (08:00-09:00)	Afternoon (17:00-18:00)
A	54	52

5.6 Discussion of Sound Climate

At the start and end of the survey period the dominant sound source at Position A was noted to be road traffic along Ringway Road West (A555). Occasional train passby's and aircraft flyovers also contributed towards the measured sound climate.

Due to the Coronavirus crisis both the Costain House and Emirates House office buildings were unoccupied with the exception of building maintenance staff. As such the existing car park was virtually empty for the duration of the noise survey. The measured noise levels should therefore be considered worst case (i.e. lower than typical).

Whilst we are unable to comment on dominant sound sources or individual sound events during the survey period, based on the surrounding environment it is likely that transportation remained the dominant sound source.

6.0 BS 4142:2014

BS 4142:2014 "Methods for rating and assessing industrial and commercial sound", describes methods for rating and assessing sound of an industrial and/or commercial nature, which includes:

- sound from industrial and manufacturing processes;
- sound from fixed installations which comprise mechanical and electrical plant and equipment;
- sound from the loading and unloading of goods and materials at industrial and/or commercial premises; and
- sound from mobile plant and vehicles that is an intrinsic part of the overall sound emanating from premises or processes, such as that from forklift trucks, or that from train or ship movements on or around an industrial and/or commercial site.

Sound of an industrial and/or commercial nature does not include sound from the passage of vehicles on public roads and railway systems.

It should be noted that the determination of noise amounting to a nuisance is beyond the scope of BS 4142:2014.

The likely impact is indicated by subtracting the existing background sound level from the rating level of the industrial and/or commercial sound. The standard states that:

- “a) Typically, the greater this difference, the greater the magnitude of the impact.*
- b) A difference of around +10dB or more is likely to be an indication of a significant adverse impact, depending on the context.*
- c) A difference of around +5dB is likely to be an indication of an adverse impact, depending on the context.*
- d) The lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact, depending on the context.*

Note 2 Adverse impacts include, but are not limited to, annoyance and sleep disturbance. Not all adverse impacts will lead to complaints and not every complaint is proof of an adverse impact.”

The industrial and/or commercial sound is expressed as the specific sound level and given as a L_{Aeq,T_r} sound level. Should the specific sound level exhibit any acoustic features (i.e. tonality, irregularity or impulsiveness) a character correction is applied. The rating level is the specific sound level with character correction applied (if applicable) and is given as a L_{Ar,T_r} sound level.

The existing background sound level is given as a $L_{A90,T}$ sound level.

The reference time interval, T_r , is 1 hour during the daytime period (07:00 to 23:00 hours) and 15 minutes during the night-time period (23:00 to 07:00 hours).

7.0 Car Park Sound Assessment

7.1 Assessment Methodology

The assessment has been undertaken in general accordance with the methods described in BS 4142:2014, “Methods for rating and assessing industrial and commercial sound” and ISO 9631-2: 1996, “Acoustics – Attenuation of sound during propagation outdoors – General method of calculation”.

In order to undertake a like-for-like comparison, both the existing and proposed car park layouts have been assessed.

It should be noted that the assessment of vehicles on public roads has not been assessed since this falls outside the scope of BS 4142:2014.

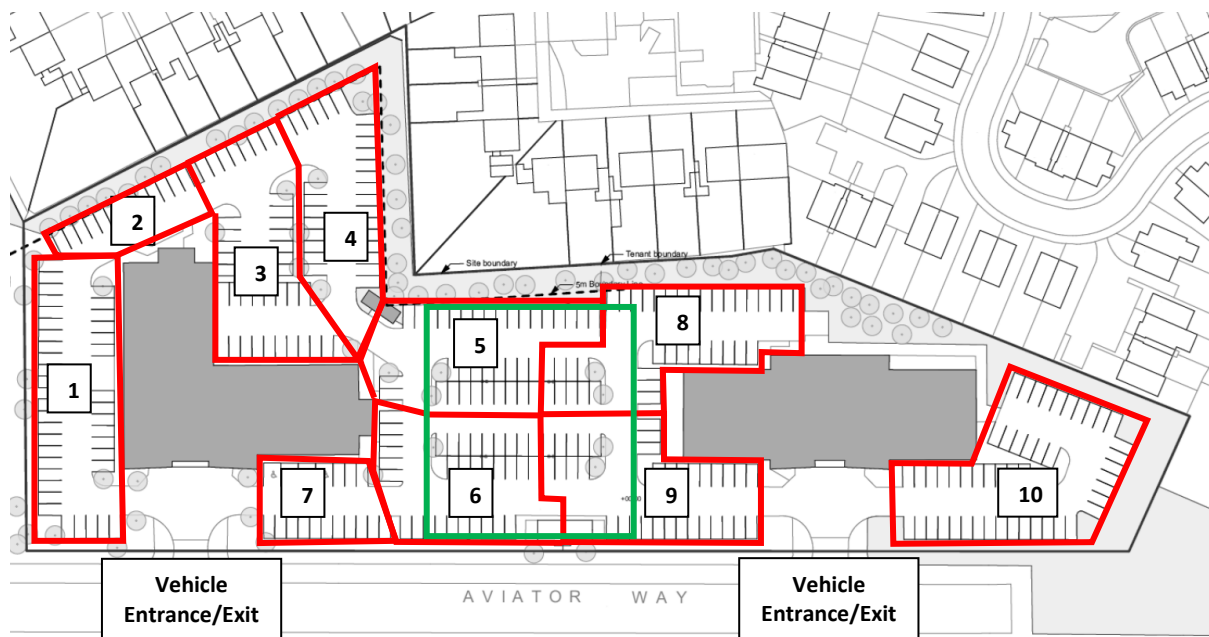
7.2 Site Layout

The layout of the existing and proposed car parks has been taken from the following site layout drawings.

Author	Drawing No.	Revision	Date
Maber	00002	P01	30.03.2020
	00005	P02	17.04.2020

The existing car park provides 206 spaces for Costain House, and 121 spaces for Emirates House at ground level totalling 327 spaces. The proposals include the construction of a car park deck in the centre of the site which will provide a net gain of 66 spaces for Costain House resulting in a total of 272 spaces for Costain House and an overall total of 393 spaces.

For the purpose of the assessment the car park has been split into individual zones as indicated on the car park layout plan below.



Car Park Layout Indicating Individual Zones

Zones 1 to 7 cover the Costain House car park whilst Zones 8 to 10 cover the Emirates House car park. The proposed car park deck is indicated by the green line. For the purposes of the assessment, the additional spaces provided by the proposed car park deck will be assessed within Zones 5 and 6.

7.3 Vehicle Numbers

Staff car parking movements are understood to occur at the start and end of the typical office working day as detailed below.

- Arrival between 08:00 to 09:00 hours;
- Departure between 17:00 to 18:00 hours.

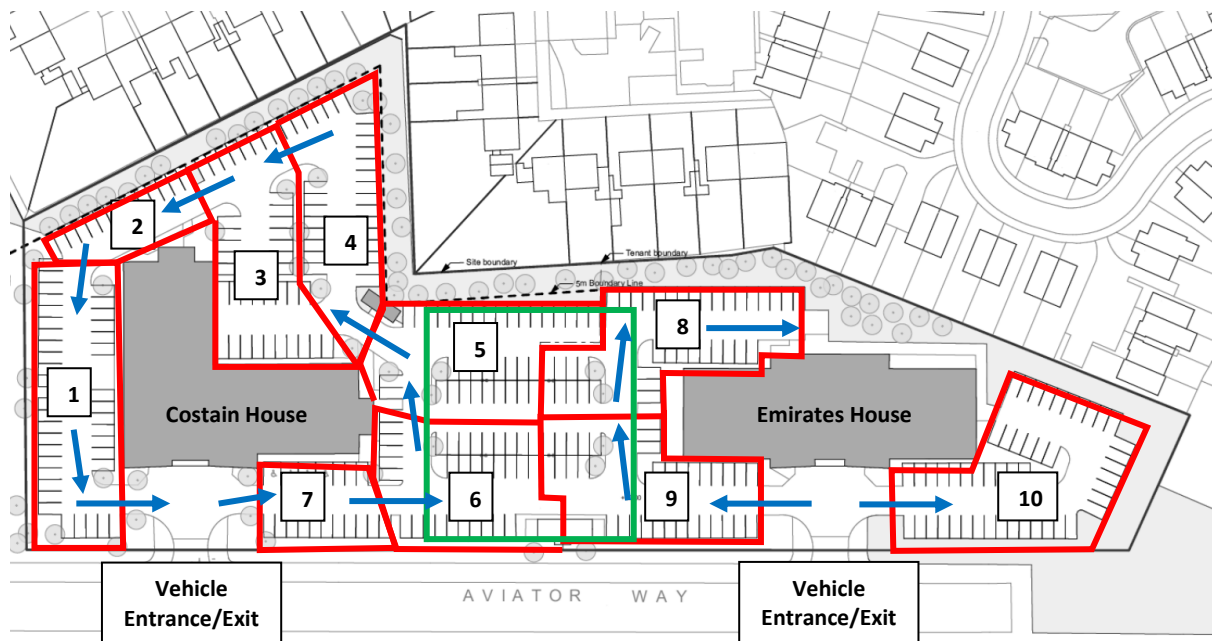
These are considered to be the key time periods when the highest number of car park movements occur throughout the day.

A worst case assessment has been undertaken by assuming that every car parking space is entered into and departed from at the start and end of the day as the office staff arrive/depart the site as detailed in the table below.

Car Park Layout	Morning (08:00 to 09:00)		Afternoon (17:00 to 18:00)	
	Cars In	Cars Out	Cars In	Cars Out
Existing	327	0	0	327
Proposed	393	0	0	393

7.4 Vehicle Movements

It is understood that vehicle flows entering and departing the car park follow the routes indicated below to each individual zone. Whilst Costain House car park has a one way system in place, Emirates House does not and vehicles will depart in the reverse route of entering.



Car Park Layout Indicating Vehicle Flows

The table below details the number of activities within each car park zone for the morning and afternoon periods for both the existing and proposed car park layouts.

Car Park Layout	Period	Activity	No. of Activities in Car Park Zone									
			1	2	3	4	5	6	7	8	9	10
Existing	Morning (08:00-09:00)	Through In	39	52	90	119	155	188	206	38	72	49
		Arrive (Park)	39	13	38	29	36	33	18	38	34	49
		Depart	0	0	0	0	0	0	0	0	0	0
		Through Out	0	0	0	0	0	0	0	0	0	0
	Afternoon (17:00-18:00)	Through In	0	0	0	0	0	0	0	0	0	0
		Arrive (Park)	0	0	0	0	0	0	0	0	0	0
		Depart	39	13	38	29	36	33	18	38	34	49
		Through Out	206	167	154	116	87	51	18	38	72	49
Proposed	Morning (08:00-09:00)	Through In	39	52	90	119	200	254	272	38	72	49
		Arrive (Park)	39	13	38	29	81	54	18	38	34	49
		Depart	0	0	0	0	0	0	0	0	0	0
		Through Out	0	0	0	0	0	0	0	0	0	0
	Afternoon (17:00-18:00)	Through In	0	0	0	0	0	0	0	0	0	0
		Arrive (Park)	0	0	0	0	0	0	0	0	0	0
		Depart	39	13	38	29	81	54	18	38	34	49
		Through Out	272	233	220	182	153	72	18	38	72	49

7.5 Vehicle Sound Data

Sound data for the vehicle activities has been taken from our in-house data base as detailed in the table below.

Vehicle Type	Activity	Duration of Event T (secs)	Sound Pressure Level at 5m
			L _{Aeq} (dB)
Car	Passby arriving through car park (10mph)	8	55
	Manoeuvring (reversing) into a car park space, engine off, door opened & closed	38	54
	Door opened & closed, engine started, manoeuvring (forward) out of a car park space	20	54
	Passby departing through car park (10mph)	8	55

No character correction has been applied to specific sound level of the above activities since they are not considered to be uncharacteristic of the existing sound climate.

7.6 Nearest Noise Sensitive Receptors

The nearest noise sensitive receptors to the car park are the rear gardens of residential properties along Lambourne Close. For the purposes of the assessment the corner plot No. 10 Lambourne Close has been selected as the worst affected receptor.

The table below details the approximate distances between the centre of each car park zone and the nearest noise sensitive receptor.

Nearest Noise Sensitive Receptor	Approximate Distance to Car Park Zone (m)									
	1	2	3	4	5	6	7	8	9	10
10 Lambourne Close	80	60	35	20	15	40	50	25	40	100

7.7 Screening Attenuation

Costain House and Emirates House currently provide, and will continue to provide, a degree of screening between certain car park zones and the nearest noise sensitive receptor. The table below details the amount of screening allowed for in the assessment.

Nearest Noise Sensitive Receptor	Screening Allowance to Car Park Zone (dB)									
	1	2	3	4	5	6	7	8	9	10
10 Lambourne Close	10	0	0	0	0	0	5	0	5	10

7.8 Ground Effect Attenuation

A worst case assessment has been undertaken by not taking any allowance for porous ground.

7.9 Atmospheric Absorption Attenuation

A worst case assessment has been undertaken by not taking any allowance for atmospheric absorption attenuation.

7.10 $L_{Aeq,T}$ Assessment

The results of the assessment are summarised in the following tables. Detailed calculations are presented at the rear of the report.

Morning Assessment

Nearest Noise Sensitive Receptor	Car Park Layout	Combined Rating Level $L_{r,15mins}$ at Receptor (dB)	Typical Background Sound Level $L_{A90,5min}$ at Receptor (dB)	Difference (dB)	BS 4142: 2014 Likely Impact
10 Lambourne Close	Existing	47	54	-7	Low
	Proposed	48		-6	Low

Afternoon Assessment

Nearest Noise Sensitive Receptor	Car Park Layout	Combined Rating Level $L_{r,1hour}$ at Receptor (dB)	Typical Background Sound Level $L_{A90,5min}$ at Receptor (dB)	Difference (dB)	BS 4142: 2014 Likely Impact
10 Lambourne Close	Existing	45	52	-7	Low
	Proposed	47		-5	Low

The worst case assessment indicates that whilst car park sound is likely to increase at No. 10 Lambourne Close by 1dB in the morning (08:00 to 09:00) and 2dB in the afternoon (17:00 to 18:00), the impact is likely to remain low.

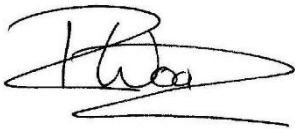
8.0 Conclusions

The Local Authority's acoustic requirements for the proposed car park extension have been established.

A detailed environmental sound survey has been undertaken in order to establish existing environmental sound levels at the proposed development

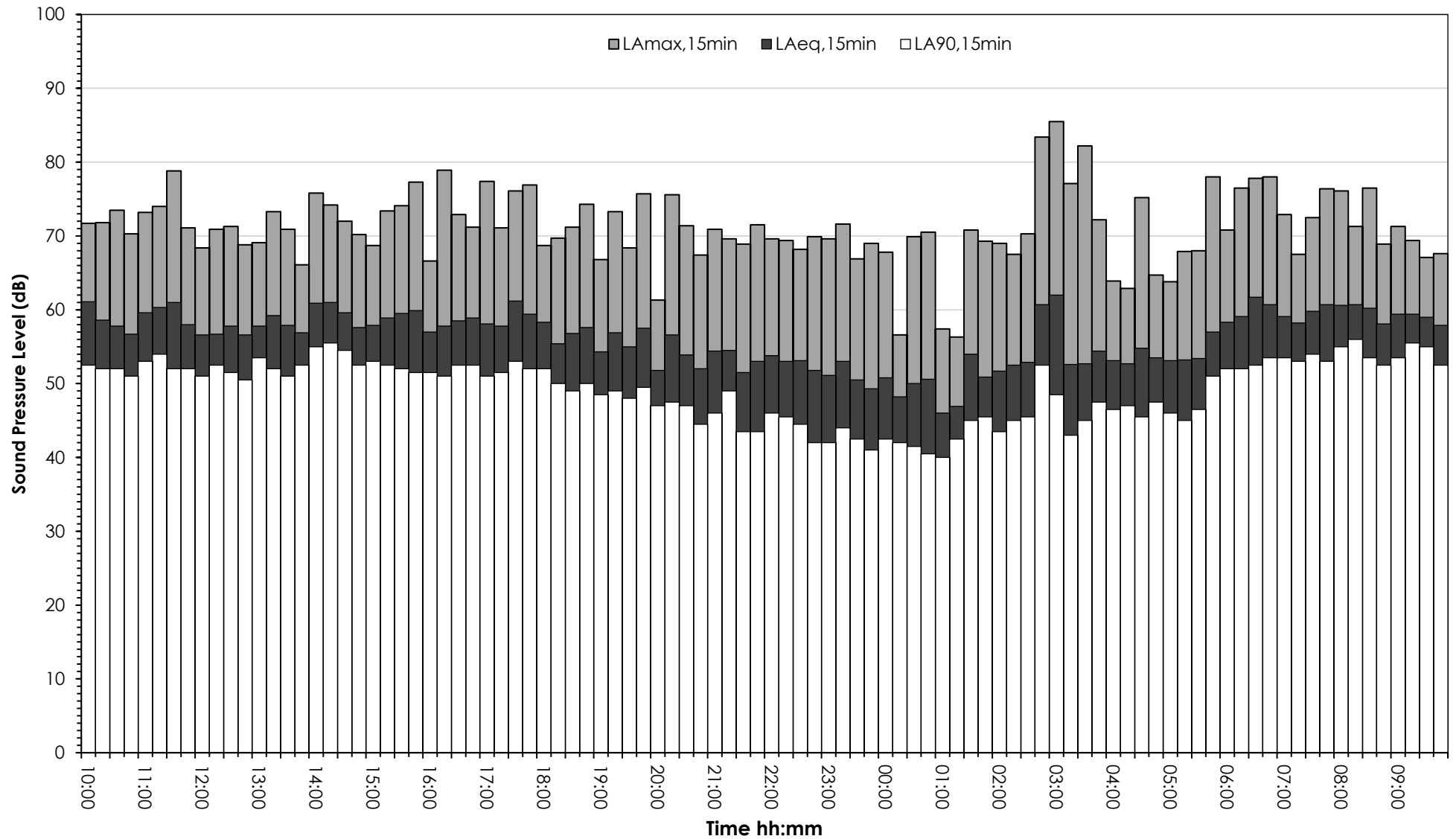
An assessment of vehicle sound from the proposed car park extension to the nearest noise sensitive receptors has been undertaken.

The assessment indicates that whilst car park sound is likely to increase at nearest noise sensitive receptor, the impact is likely to remain low.

A handwritten signature in black ink, appearing to read 'Robin Wood', with a stylized flourish underneath.

Robin Wood
LIGHTHOUSE ACOUSTICS

Costain House, Aviator Way, Manchester
Time History Graph - Thursday 20 August 2020 to Friday 21 August 2020
 $L_{Amax,15min}$, $L_{Aeq,15min}$ & $L_{A90,15min}$ Noise Levels at Position A



No. 10 Lambourne Close, Morning, Existing

No. 10 Lambourne Close, Morning, Proposed[illegible]

Car Park Sound Assessment

No. 10 Lambourne Close, Afternoon, Existing

Descriptor	1				2				3				4				5				6				7				8				9				10																																																																																																																																																																																																																																																					
	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby driving in car park (10mph)	Manoeuvring (reversing) into a space in car park

No. 10 Lambourne Close, Afternoon, Proposed

Descriptor	1				2				3				4				5				6				7				8				9				10																																																																																																																																																																																																																																																						
	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park	Passby departing car park (10mph)	Passby arriving in car park (10mph)	Manoeuvring (reversing) into a space in car park	Manoeuvring (reversing) into a space in car park