

Report

Bat Survey Report

Broad Street Mall

Service Area

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Ecology reports are considered valid for 12 to 36 months after the survey date(s) depending on survey type and findings. Should the development not commence within the validity period, the survey(s) should be repeated, and the report updated.

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1 Non-technical Summary

This bat survey report has been prepared by Sweco for McLaren (Broad Street Mall) Limited and relates to the proposed residential and commercial development at Broad Street Mall, Broad Street, Reading, RG1 7QE, for which detailed planning permission has already been sought (ref. 240174).

The purpose of this report is to address the concerns in the memo from RBC Ecology Consultations, which requested further information on the suitability of the lower ground level service area for roosting and hibernating bats.

A preliminary roost assessment and remote monitoring bat survey of the service area were carried out by Sweco in May and June 2024 respectively. The service area was found to be well-lit by artificial lighting for 24 hours a day, frequently disturbed by continuous vehicle traffic, and is subject to significant temperature fluctuation. Any potential roosting features such as gaps in brickwork, were found to be either cluttered by pipes and services, well-lit by artificial lighting, and/or in an extremely dusty, cobwebbed or damp state, reducing the likelihood of bats using them.

No evidence of roosting bats was recorded during the preliminary roost assessment and no bat calls were recorded during a subsequent 14-day remote monitoring bat survey. As the bat roost suitability of the lower ground level service area is unlikely to change significantly over the course of the year (i.e. it will continue to be well-lit, disturbed, and unsuitable), the service area is not considered to be suitable for roosting or hibernating bats and no further surveys are recommended.

2 Introduction

2.1 Purpose

This bat survey report has been prepared by Sweco for McLaren (Broad Street Mall) Limited and relates to the proposed residential and commercial development at Broad Street Mall, Broad Street, Reading, RG1 7QE, for which detailed planning permission has already been sought (ref. 240174). Proposals are currently understood to involve the part-demolition of the podium deck on Dusseldorf Way and Queens Walk and amendments to the existing retaining walls, as shown on AHR Architect Ltd's drawing BSM-AHR-ZZ-B1-DR-A-08100.

An initial ecological desk study, UK habitat classification survey and protected species scoping survey were undertaken for the main mall area by Sweco in December 2022. This survey and the subsequent Preliminary Ecological Appraisal [1] (PEA) report did not include the lower ground level service area, where the retaining walls are located.

RBC Ecology Consultations reviewed the application on behalf of Reading Borough Council and requested further information on the suitability of the lower ground level service area for roosting and hibernating bats [2]. Sweco was subsequently instructed to carry out a preliminary roost assessment of this area, as well as a remote monitoring bat survey, in May and June 2024 respectively, with the findings of these surveys included herein.

2.2 Site Description

The site occupies an area of approximately 0.7 ha and is located around Ordnance Survey national grid reference SU 71203 73315 within the centre of Reading.

Habitats within the service area of the site include buildings and hardstanding. The site is within an urban area and is surrounded by residential, commercial and retail buildings. Areas of semi-natural green space, including an urban park and vegetable gardens (allotments), are present to the south of the site. The indicative site red line boundary is shown in Figure 1 below:

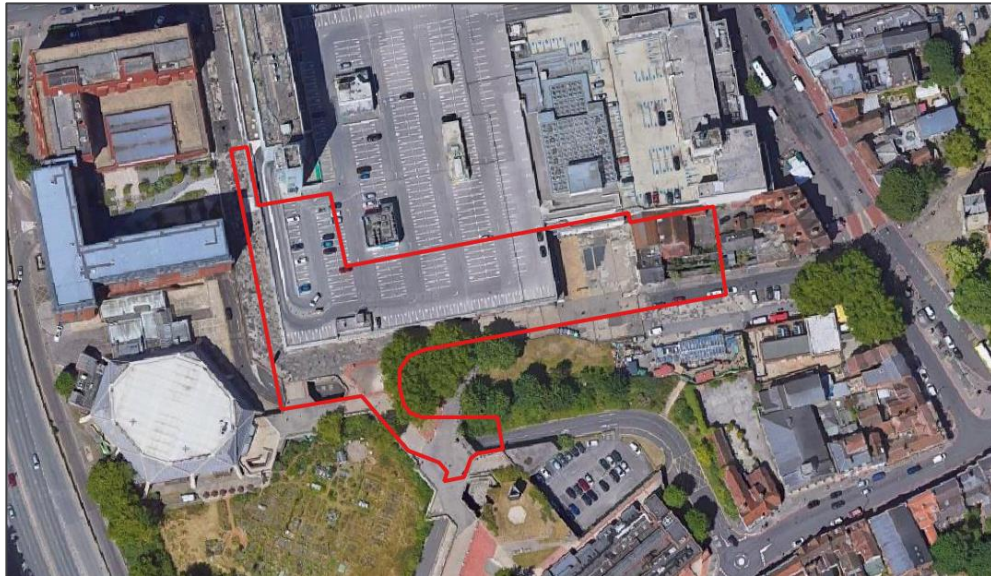


Figure 1. Indicative site boundary (red line).

Map data: Imagery © 2023 Getmapping plc, Infoterra Ltd & Bluesky, Maxar Technologies, The GeoInformation Group, Map data © 2023.

2.3 Description of Works

The development proposals are for the part-demolition of the podium deck on Dusseldorf Way and Queens Walk and amendments to the existing retaining walls to facilitate the construction of three interconnected tower blocks and an adjacent smaller residential block. The buildings are comprised of apartments and residential amenity and servicing space. The ground floor of the development also consists of a mix of non-domestic units which include retail spaces, residential lobbies and a gym.

3 Legislation and Policy Context

3.1 Current UK Legislation

The main pieces of legislation relating to ecology within England and Wales are:

- The Conservation of Habitats and Species Regulations 2017 (as amended)
- The Wildlife and Countryside Act 1981 (as amended)
- The Natural Environment and Rural Communities (NERC) Act 2006
- The Environment Act 2021

The reader is referred to the original legislation for definitive interpretation.

3.2 Bats

All bat species belonging to the Vespertilionidae and Rhinolophidae families are European protected species, and are afforded protection in the UK under the Conservation of Habitats and Species Regulations 2017 (as amended). In addition, these species are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Taken together, these pieces of legislation make it an offence to:

- intentionally, deliberately or recklessly capture, take, kill or injure any bat
- possess, control or transport any bat;
- damage or destroy a resting place or breeding place for bats.
- deliberately disturb bats, in particular any disturbance which is likely to:
 - impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or
 - impair their ability to hibernate (or migrate in the case of migratory species); or
 - affect significantly the local distribution or abundance of any bat species
- intentionally or recklessly obstruct access to any structure or place used for shelter or protection by a bat
- intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for that purpose

4 Methods

4.1 Personnel

This report was produced by Milly Brinsford, BSc (Hons), Senior Ecologist, who has over seven years' experience in ecological consultancy including surveys and mitigation for a range of protected species and in producing ecological impact assessments. This report was reviewed by Leonora Hunt MSc, Ecologist, who has over three years' experience and approved by Dr Martin Brammah PhD MA (Cantab) BA (Hons) CEng MCIEEM MRSB who has over 20 years' experience in ecological consultancy and research, including being the Named Ecologist on numerous bat mitigation licences.

4.2 Desk Study

The Multi-Agency Geographic Information for the Countryside (MAGIC) [3] online database was consulted to obtain information on granted European Protected Species licences for bats within 2 km of the site. In addition, Sweco's Preliminary Ecological Appraisal [1] was consulted for information on bat species records from Thames Valley Environmental Records Centre (TVERC), also from within 2 km of the site [4].

4.3 Bats

A Preliminary Roost Assessment (PRA) to assess the service area for its potential to support roosting and hibernating bats was conducted on site in line with current survey guidance [5] on 24 May 2024 by Milly Brinsford, who holds a Bat Class 2 Survey Licence (2021-10051-CL18-BAT). The survey comprised a careful external inspection of the service area and the podium deck, using ladders, high-powered torches and an endoscope, as appropriate, to search for roosting bats or any evidence to suggest the presence of roosting bats.

Evidence of bats includes:

- Bat droppings;
- Staining around the entrance to Potential Roost Features (PRFs);
- Feeding remains (such as moth wings);
- Scratch marks around PRF entrances; and
- Live/dead bats.

The scoping criteria for roosting habitat was taken directly from best practice guidance [5] and is summarised in Table 4.1.

Table 4.1. Suitability of Roosting Habitats for Bats

Suitability	Roosting Habitats
None	No habitat features on site likely to be used by any roosting bats at any time of year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels).

Suitability	Roosting Habitats
Negligible	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity and not a classic cool/stable hibernation site, but could be used by individual hibernating bats).
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status with respect to roost type only, such as maternity and hibernation – the categorisation described in this table is irrespective of species conservation status, which is established after presence is confirmed.
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool/stable hibernation site

4.3.1 Remote Monitoring Bat Survey

In order to provide additional survey information to confidently rule out the likelihood of bats using the service area, three Anabat Express static bat detectors were deployed in different locations in the lower ground level service area to record for 14 consecutive nights of data from 11 June to the 25 June 2024.

This monitoring has been carried out during the peak bat active season (May to September), when bats would be expected to make regular use of suitable habitat.

Static bat detectors were programmed to record bat calls from 30 minutes before dusk to 30 minutes after dawn each night over the duration of their deployment.

The locations of the static bat detectors were intentionally chosen so that they would be close to identified features large enough to admit bats. These locations are shown on drawing 65213151-SWE-XX-XX-D-J-0001 and pictures are shown below. The data collected was then analysed using AnalookW software.

5 Results

5.1 Desk Study

Consultation of the MAGIC online interactive mapping tool confirms the presence of 10 European protected species licences issued for bats within 2 km of the site. The closest was granted to allow the damage and destruction of a resting place for common pipistrelle (*Pipistrellus pipistrellus*) bats (ref. 2017-32379-EPS-MIT) and is located approximately 620 m to the south-west of the site.

There are 819 records of 11 species within 2 km. Species recorded include barbastelle (*Barbastella barbastellus*), serotine (*Eptesicus serotinus*), Daubenton's bat (*Myotis daubentonii*), noctule bat (*Nyctalus noctula*), Leisler's bat (*Nyctalus leisleri*), common pipistrelle, Nathusius' pipistrelle (*Pipistrellus nathusii*), soprano pipistrelle (*Pipistrellus pygmaeus*), brown long-eared bat (*Plecotus auritus*) and *Myotis* bat (*Myotis* spp.).

5.2 Bats

5.2.1 Preliminary Roost Assessment

No evidence of roosting bats was recorded during the preliminary roost assessment survey. The lower ground level service area is constructed from brick and concrete walls, with a concrete ceiling and concrete pillars and is of double height. The podium deck is also constructed from concrete. The area is well lit throughout with linear artificial lighting that remains on 24 hours a day to facilitate the continuous deliveries made to the mall during the day and at night. In addition, all the cars that use the mall car park must exit via the lower ground level service area, resulting in a continuous flow of traffic during the day.

There are various pipes and metal fixings attached to the walls and ceiling throughout the service area. A fine mesh netting covers the ceiling at two locations within the service area - the eastern and western ends - to prevent pigeons nesting inside. Where the netting is not present many pigeons are nesting on various pipes and services on the walls inside the service area. At certain locations there are areas of damp and water damage on the walls and ceiling where pipes have leaked continuously over time. The temperature inside of the service area during the initial preliminary roost assessment was approximately 17 °C, but during the setting up and the retrieval of the static bat detectors the temperature inside had risen considerably to approximately 22 °C due to a period of sunny weather outside. This demonstrates that the service area does not remain at a stable temperature and is subject to change depending on the external weather conditions, which reduces its suitability for hibernating bats.

There were several holes in the brickwork inside of the service area in the eastern section, although these were heavily obstructed by numerous pipes and services with no clear, uncluttered flight lines. Where possible, an endoscope was used to inspect these holes and they were found to lead into cavity wall that was heavily cobwebbed, or obstructed by dirt and pigeon droppings, where the wall was open to the top. There were also some gaps between the walls and services at several locations within the service area, however these appeared to be too small for bats to fit comfortably and were covered by cobwebs and debris. In addition, there were several circular holes in

the ceiling which were approximately 10cm wide and 10cm deep, however these did not lead to cavities and were found to be damp with water damage from leaking pipes.

Under the podium deck there are three open ventilation shafts in the concrete wall. These were inspected with an endoscope and found to be extremely dirty and dusty inside, with the entrances partially blocked by their broken covers and by litter thrown inside the vent and well-lit by artificial lighting. The layers of dust would be easily disturbed if bats were regularly accessing these areas, but no such disturbance was observed.

As no evidence of roosting bats was recorded and the service area is exposed to continuous high levels of light pollution and vehicle activity, subject to frequent temperature fluctuation, and extremely dusty, dirty and/or damp with a high number of roosting pigeons present, the service area is considered to provide negligible suitability for roosting and hibernating bats. Site photographs can be found within the appendix of this report.

5.2.2 Remote Monitoring Survey

Throughout the entire 14-night remote monitoring period no bat calls were recorded on any of the three static bat detectors placed within the service area.

6 Conclusions

This bat survey report relates to the proposed residential and commercial development at Broad Street Mall, Broad Street, Reading, RG1 7QE, for which detailed planning permission has already been sought (ref. 240174). Proposals are currently understood to involve the part-demolition of the podium deck on Dusseldorf Way and Queens Walk and amendments to the existing retaining walls within a lower ground level service area.

No evidence of roosting bats was recorded during the preliminary roost assessment.

The service area was found to be well lit at all times, frequently disturbed by continuous vehicle traffic, and subject to temperature fluctuation. In addition, any potential roosting features such as gaps in brickwork and ventilation shafts, were found to be either cluttered by pipes and services, well-lit by artificial lighting, and/or were in an extremely dusty and cobwebbed state. In addition, no bat calls were recorded by any of the three static bat detectors deployed inside the building during the 14-night survey period, despite recording taking place during the peak bat active season. As a result, the service area is not considered to be suitable for roosting or hibernating bats and no further survey is recommended.

7 References

- [1] Sweco UK Limited, "Preliminary Ecological Appraisal. Broad Street Mall. 65208344-SWE-XX-XX-T-J-0001-C05," 2024.
- [2] RBC Ecology Consultations, "Ecology Memo," 14 April 2024.
- [3] MAGIC, "Site Check," [Online]. Available: <https://magic.defra.gov.uk/>. [Accessed July 2024].
- [4] Thames Valley Enviromental Records Centre, [Online]. Available: www.link.to.records.centre. [Accessed December 2022].
- [5] Bat Conservation Trust, Bat Surveys for Professional Ecologists: Good Practice Guidelines, 4th ed., J. Collins, Ed., London: The Bat Conservation Trust, 2023.

Site Photographs



Photo 1. Showing the brightly lit eastern side of the service area



Photo 2. Showing the brightly lit central section of the service area



Photo 3. Showing the brightly lit western end of the service area, with netting present



Photo 4. Showing a gap in the brickwork, cluttered by pipes and services



Photo 5. A gap in the brickwork, also cluttered by pipes and services in the eastern end of the service area.



Photo 6. Showing a circular hole in the ceiling with water damage.



Photo 7. Showing a small gap between some metal services and the wall, covered by cobwebs and debris



Photo 8. Showing the dirt and dust accumulated on the walls of the service area

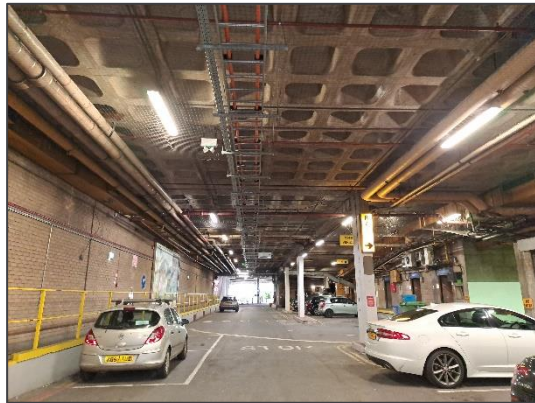
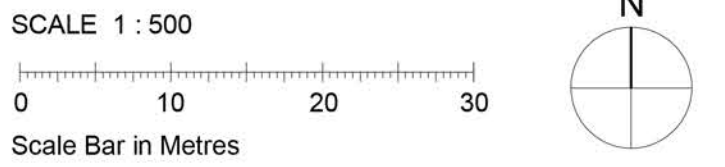
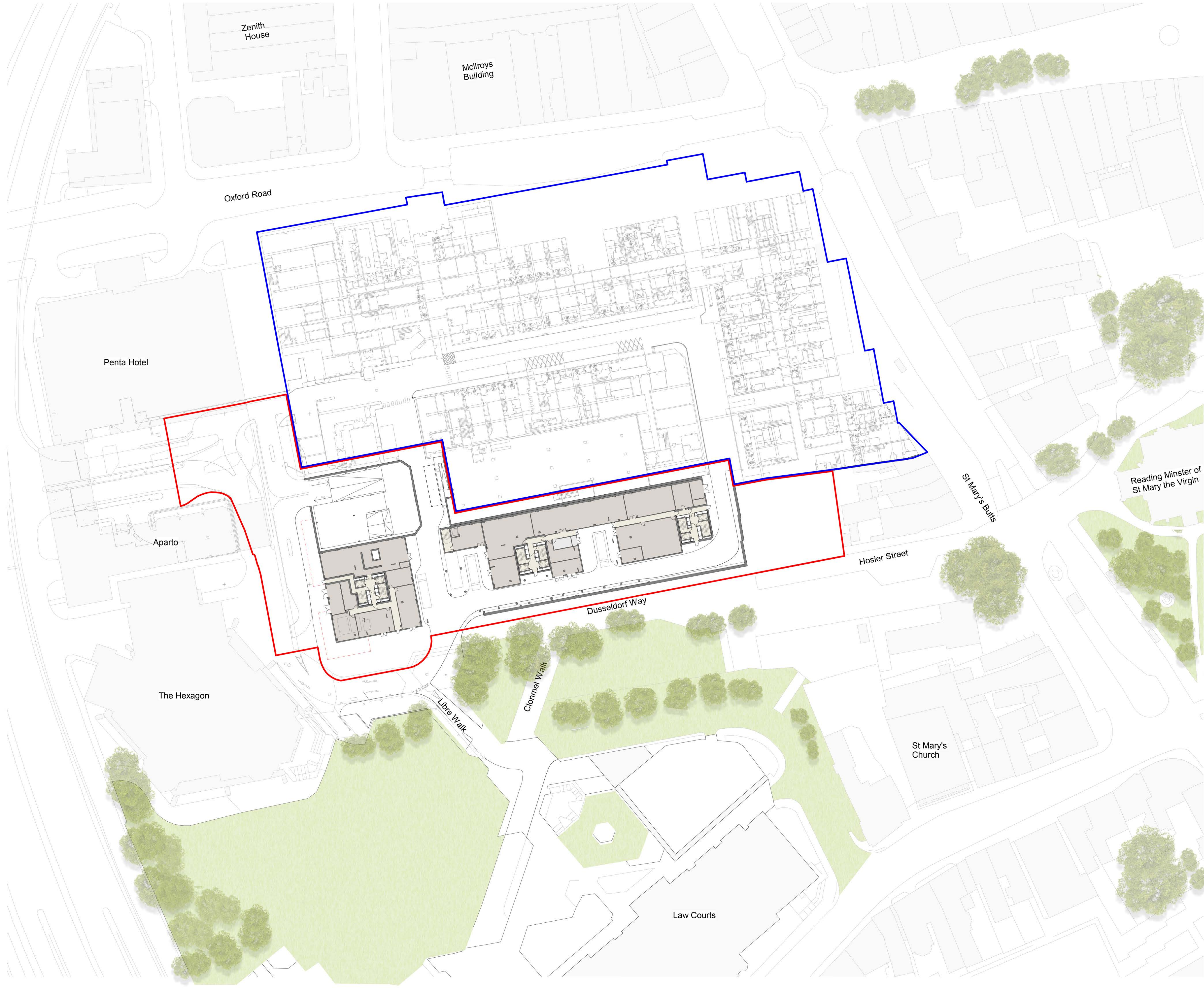


Photo 9. Showing the brightly lit interior of the service area

Drawings

BSM-AHR-ZZ-B1-DR-A-08100: Site Plan – Basement

65213152-SWE-XX-XX-D-J-0001: Bat Static Detector Location Plan



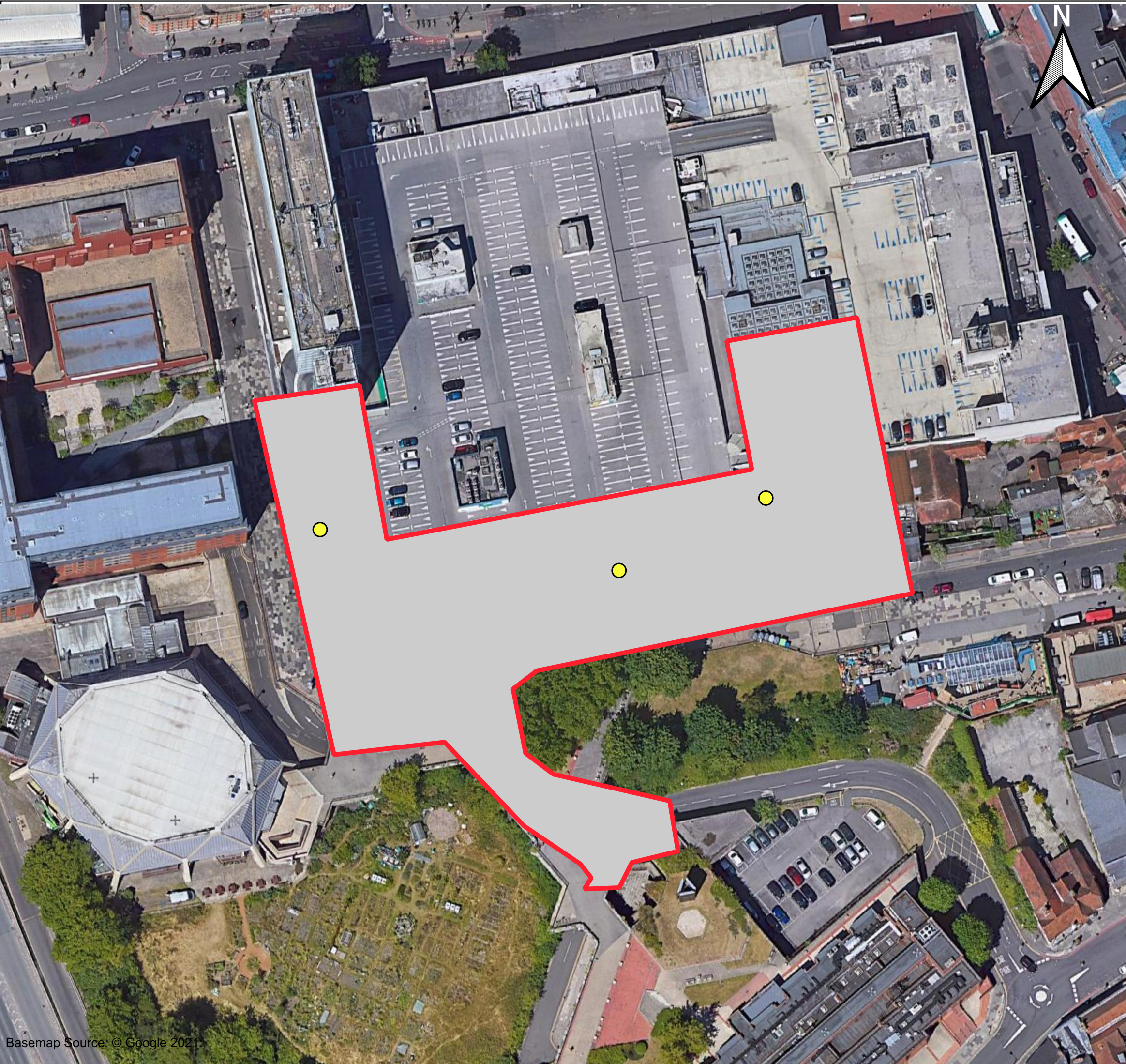
- Key
- Circulation
 - BOH
 - Comms
- Key
- Red Line Boundary
 - Applicants Ownership

P1	Planning Issue	23/01/24	BS	DB
Rev	Description	Date	Dr	App
original by		date created	by	by
BS		11/12/23	DB	

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client name	McLaren (Broad Street Mall) Ltd and UREF III LP		
project	Broad Street Mall Residential		
drawing	Site Plan - Basement		
computer file	110.32.111CEM_Profile_Folder_redactorbathymstewart\Documents\Rest_Plan\Local Plan\Rev 2017BSM-AHR-ZZ-B1-A-08100_Apartment_bathymstewart.vxd		plot date
project number	2022.00307.000		scale
drawing number	BSM-AHR-ZZ-B1-DR-A-08100		1 : 500 @A1
	rev	issue status	
	P1	S2	
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Legend

- Red Line Boundary
- Static Bat Detector Locations
- Service Area

0 10 20 30 40 50 Metres

C01	05.07.2024	For Information	MRB	LH	MB
Rev.	Rev. Date	Drawing Suitability	Drawn	Checked	Appr'd
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Client					
McLaren (Broad Street Mall) Limited					
Project					
Broad Street Mall					
Drawing Title					
Bat Static Detector Location Plan					
Status Desc.	For Information			Status	S2
Project No.	65213151			Scale	1:800
Drawing No.	65213151-SWE-ZZ-XX-DR-J-0001			Sheet Size	A3
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