JANUS
Architecture

DESIGN AND ACCESS STATEMENT

For First Bus

First Bus Huddersfield Depot,
Old Fieldhouse Lane,
Huddersfield,
HD2 1AG

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Revision:

Revision	Detail	Date

1.0 INTRODUCTION

This application is for proposed works to the current Huddersfield Bus Depot which is operated by First Bus. The application is for Electric infrastructure for electric vehicle charging works at the current bus depot.

The proposal includes the installation of new electrical infrastructure to provide a point of connection to the local power network. This will comprise a GRP-housed ring main unit (RMU) and three GRP-housed transformers. These elements will be located near the south-eastern and northern boundaries of the site.

This 'Design and Access Statement' aims to provide an overview of the design process and physical characteristics of the site

2.0 SCHEDULE OF PLANS FOR APPROVAL

A full table with a schedule of the drawings submitted with the planning application has been included below.

Identification No.	Title	Rev
1345-100	Location Plan – As Existing	-
1345-101	Site Plan – As Existing	-
1345-102	Site Plan – As Proposed	-
1345-103	Substation Elevations – As Proposed	-

We have also reviewed the Local Information Requirements from Kirklees Council Website, and we are to provide the following document for Validations

Document	Required	Comments
Archaeological Field Evaluation	No	Existing bus depot.
Flood Risk Assessment (FRA)	No	Less than 1ha within flood zone 1.
Arboricultural Assessment	No	No trees affected by works.
Noise impact assessment	No	Overall noise of equipment not noticeable on a busy industrial site.
Air quality assessment	No	N/A

3.0 PLANNING HISTORY

The site operates as an existing first bus depot.

Previous planning applications for the site are as follows:

89/60K/03902/B2
Decision Date: 20 April 1990
Description: Outline application for industrial and warehouse development

95/62/91727/W2
Decision Date: 11 December 1995
Description: ERECTION OF BUS DEPOT

2008/62/91201/W2
Decision Date: 15 May 2008
Description: FORMATION OF 2.4M HIGH PALISADE FENCING WITH AUTOMATIC VEHICULAR ACCESS AND SECURITY CONTROLLED PEDESTRIAN ACCESS GATES

2023/CLASS J/90382/W
Decision Date: 03 April 2023
Description: Prior notification for installation of 358 roof mounted solar photovoltaic panels

4.0 SITE

The site operates as an existing First Bus depot, comprising a main depot building situated centrally, and most bus parking is located within the northern portion of the site. The existing bus washing and fuelling facilities will remain in their current positions and are not affected by the proposed works.

The site is situated within an established industrial area and is identified by the Government's Flood Risk Service as being within Flood Zone 1, indicating a very low probability of flooding.

There are no ecological designations within the site boundary, and the proposed works are not anticipated to give rise to any adverse environmental effects.



5.0 AMOUNT OF DEVELOPMENT

The proposal includes the installation of a new RMU and three new transformers, each to be housed within purpose-designed GRP enclosures. The proposed substations are small in comparison to the site. Refer to drawing**: 1345 – 102 Site Plan – As Proposed** and **1345-103 Substation Elevations – As Proposed** for more information.

6.0 DESIGN / LAYOUT

To facilitate the required site electrification, four new GRP housings are proposed, as detailed on drawing 1345-103. These enclosures will accommodate the necessary electrical infrastructure, including the RMU and transformers. A typical example of a green GRP substation housing is illustrated below.



7.0 ECOLOGY

There are no significant trees located within the site boundary. A soft landscaped area lies to the west, between the site and Shaw Hill main road, which will remain undisturbed for the duration of the construction works.

8.0 ACCESS

The existing site access will be retained for all operational and construction activities. Bus fuelling and washing operations will continue to take place in their current locations, and the general arrangement and orientation of bus parking will remain consistent with the existing layout.

9.0 NOISE STATEMENT

The Client has undertaken several similar installations to that proposed within this application. The Ring Main Unit (RMU) and transformers are to be housed within GRP enclosures, providing both physical protection and effective noise attenuation for the equipment.

Noise data supplied by the manufacturer indicates a maximum sound level of 61 dB(A) for a 1600 kVA transformer. It should be noted that this figure represents a worst-case scenario, and operational noise levels are typically considerably lower, with transformers generally operating at near-silent levels during normal conditions.

Site inspections have confirmed that transformers represent the primary source of any marginal increase in ambient noise; however, the expected levels are not anticipated to result in any material impact on nearby residential properties.

Table 1 — Transformer details

Voltage Ratio	Type	Phase	Connection phase displacement symbol	Rated Power(kVA)	Short-Circuit Impedance (%) (Note 10)	Sound Power Level (dBA)
6 600/433-250 or 11 000/433-250 or 20 000/433-250 or 33 000/433-250	3 1 3 1 3 1 3 1 2 3 1 2 3 1 2 1 2 1 2 1 2 1	Three	Dyn11	25 50 100 160 200 315 500 800 1 000 1 600 2 000	4.5 4.5 4.75 4.75 4.75 4.75 4.75 4.75 4.75 5.5 6.0	45 45 48 48 52 54 56 58 59 61 62

Even at the maximum recorded noise level of 61 dB(A), the output is comparable to that of a normal conversation and is therefore considered non-disruptive to surrounding properties. This relationship is illustrated in the Noise Chart provided on the following page.

Accordingly, it is concluded that the proposed installation will not result in any perceptible increase to existing ambient noise levels or give rise to any adverse impact on nearby sensitive receptors.

LEVELS OF NOISE In decibels (dB)

PAINFUL & DANGEROUS		
Use hearing protection or avoid	140	· Fireworks · Gun shots · Custom car stereos (at full volume)
	130	· Jackhammers · Ambulances
UNCOMFORTABLE		
Dangerous over 30 seconds	120	· Jet planes (during take off)
VERY LOUD		
Dangerous over 30 minutes	110	· Concerts (any genre of music) · Car horns · Sporting events
	100	· Snowmobiles · MP3 players (at full volume)
	90	· Lawnmowers · Power tools · Blenders · Hair dryers
Over 85 dB for extended periods can cause permanent hearing loss.		
LOUD		
	80	· Alarm clocks
	70	· Traffic · Vacuums
MODERATE		
	60	· Normal conversation · Dishwashers
	50	· Moderate rainfall
SOFT		
	40	· Quiet library
	30	· Whisper
FAINT		
	20	· Leaves rustling