



Avalon Data Centre 132/11kv 120MVA Electricity Connection

Presentation to
North West Chilterns Community Board

Presented by
David Burton & Dave Gaughan



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JSM Overview

Privately owned business built over 20 years...

- £120m turnover largely based on repeat business
- Extensive local authority contacts & other third-party knowledge
- Long standing framework agreements including National Grid & SSE

Strong reputation in the market...

- Particular expertise within the Southeast and central London
- Power & Fibre core markets (NERS accredited)
- Multi-Utility capability (GIRS and WIRS accredited)

Operations

- 90% of work is self-delivered including excavation & reinstatement
- Subcontractors are used for some specialist activities
- 100% of Power project staff are directly employed
- 90% of specialist plant is owned by JSM (including cable pulling equipment, cable leak detection and cable fluid degasifying plants)

Strong & experienced team in place...

Dean Martin
Head of Streetworks &
Network Mgmt

Dave Burton
Operations Director

Dave Gaughan
Contracts Manager

Alex Thacker
SHEQ Manager

Nick Ward
Senior Project Manager

Paul Eastwood
Project Manager

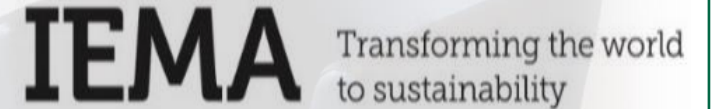
2 x Site Supervisors

A dedicated management team with decades of experience and the ability to deliver on time, on budget and of the best quality



“At JSM we value the global commitments set out for a net zero carbon future and are well placed to help meet the challenge”

Accreditations



Project Overview

Avalon DC Limited have commissioned JSM for the design & build of a 132/11kV 120MVA Substation and cable installation associated with the new development at the site accessed from Haw Lane, Saunderton.

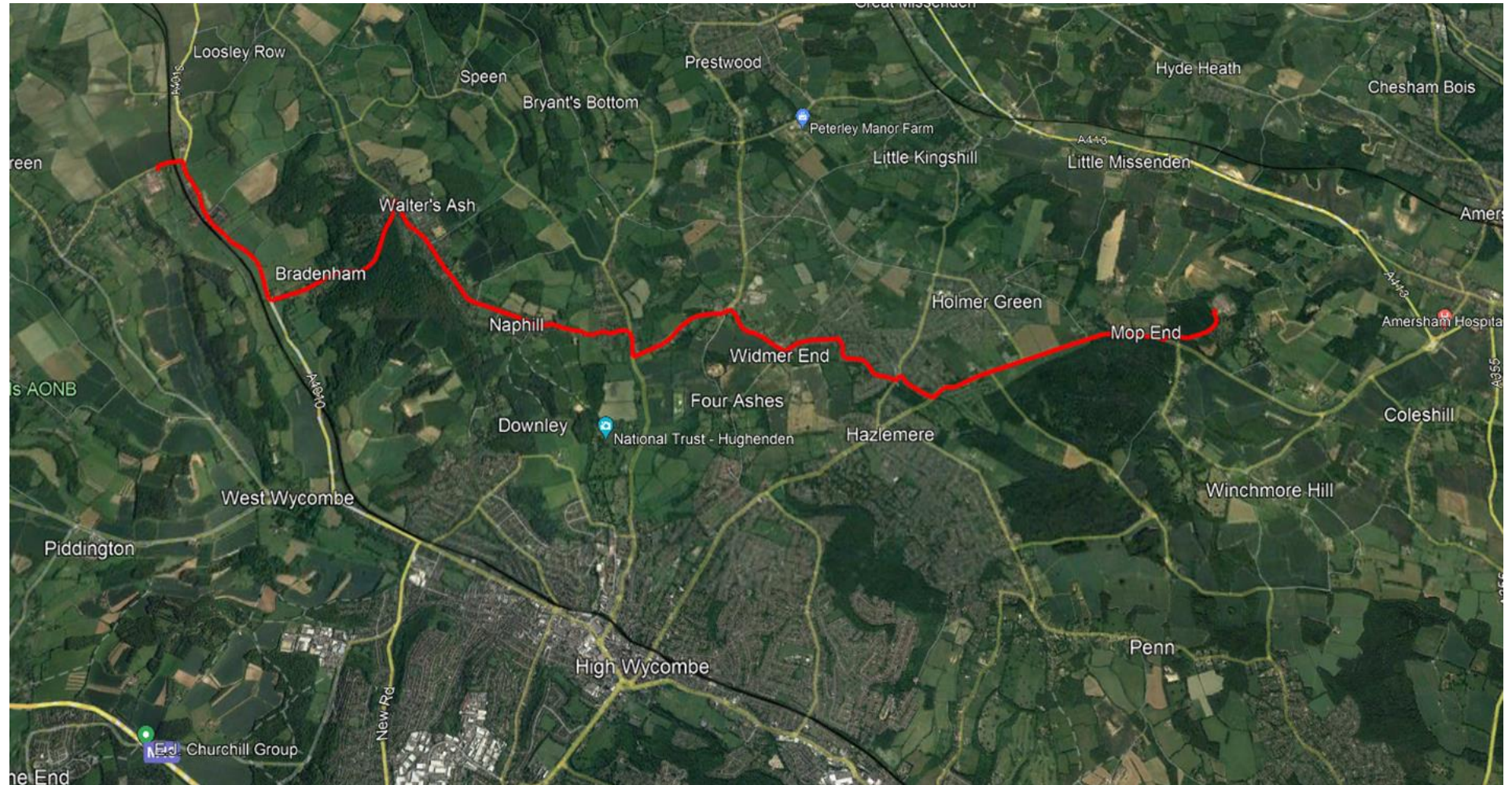
JSM will carry out the excavation of 2 sets of ducts, cable laying and reinstatement from the Cable Sealing End Structures within the National Grid Amersham Substation to the new Avalon DC Limited Substation. The final Connection at Amersham Substation is to be completed by National Grid.

The cable route from the National Grid Substation at Amersham comprises of 16.4km of two 132kV circuits, and associated Fibre Optic Cables.

- Phase 1 = Cable Duct Installation
- Phase 2 = Joint Bays, Cable Installation and Jointing

Project Overview

Cable Route 16.4km



Project Overview

Point of Connection, National Grid Site, Mop End Lane



Project Resourcing

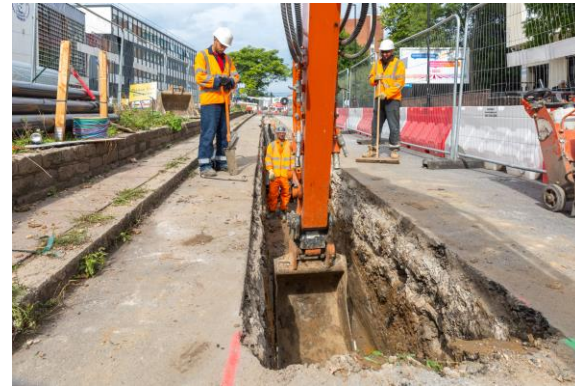
Dedicated Site Management

- Will have a clear understanding of the project commitments and deliver against them
- Providing a single point of communication
- Will have full responsibility including liaison with National Grid to ensure that project programmes are closely aligned to achieve the desired energisation date, and also close liaison with the Local Highways Authority

In-house civil engineering and street-works noticing team

- Gives us the unique ability to directly design, plan, manage and coordinate all of the electrical and civil engineering activities without heavy reliance on third party subcontractors
- We believe that the success of a project is only realised when these activities complement each other 'hand in glove'.

Methodology (Trench Works)




Methodology (Joint Bays)



Average size of 132kV Joint Bay – 12m x 3m

Special Engineering Difficulties (SEDs)

Valley Road / Cryers Hill Road

Feasibility Study (Stage 1 Desktop Review)	
Cam Capital, Molins 100MVA Connection – Stage 1 Feasibility Study	Date: 6 th Decemeber 2021
SPECIAL ENGINEERING DIFFICULTY (SED) REPORT	

SED Report 1

SED / STRUCTURE NAME	CULVERT CROSSING
STRUCTURE NO.	

LOCATION	Valley Road, High Wycombe HP14 4LG	CHAINAGE LOCATION (m)	7820m
EASTING (m)	486464		
NORTHING (m)	196421		

TYPE OF SED					
Bridge Structure	Culvert Crossing	Retaining Walls	Subway	Undertaker's Apparatus and Utilities	Other
	X				

KNOWN UTILITIES:	BT, Electric, Foul Water, Gas & Water
CONDITION:	Not Known
COMMENTS:	PAS128 Utility Surveys and Trial Holes to confirm available and/or route for proposed trench configuration or HDD installation.

PHOTO 1. Location of SED 1 – Culvert Crossing




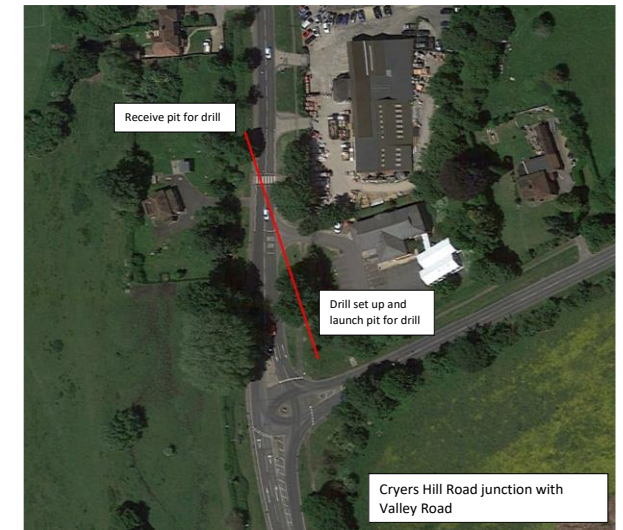
Feasibility Study (Stage 1 Desktop Review)	
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SPECIAL ENGINEERING DIFFICULTY (SED) REPORT	

PHOTO 2. Side view SED 1 – Culvert Crossing



HDD



Special Engineering Difficulties (SEDs)

Haw Lane

Feasibility Study (Stage 1 Desktop Review)	
Cam Capital, Molins 100MVA Connection – Stage 1 Feasibility Study	Date: 6 th Decemeber 2021
SPECIAL ENGINEERING DIFFICULTY (SED) REPORT	

Feasibility Study (Stage 1 Desktop Review)	
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SPECIAL ENGINEERING DIFFICULTY (SED) REPORT	

SED Report 2

SED / STRUCTURE NAME	RAILWAY BRIDGE UNDERPASS				
STRUCTURE NO.					
LOCATION	Haw Lane, High Wycombe HP14 4LG	CHAINAGE LOCATION (m)	16100m		
EASTING (m)	480946				
NORTHING (m)	198767				
TYPE OF SED					
Bridge Structure	Culvert Crossing	Retaining Walls	Subway	Undertaker's Apparatus and Utilities	Other
X					
KNOWN UTILITIES:	BT, Electric, LP & MP Gas & Water				
CONDITION:	Not Known				
COMMENTS:	PAS128 Utility Surveys and Trial Holes to confirm available and/or route for proposed trench configuration or HDD installation.				

PHOTO 2. Side view SED 2 – Railway Bridge Underpass



PHOTO 3. Side view SED 2 – Railway Bridge Underpass



PHOTO 1. Location of SED 2 – Railway Bridge Underpass



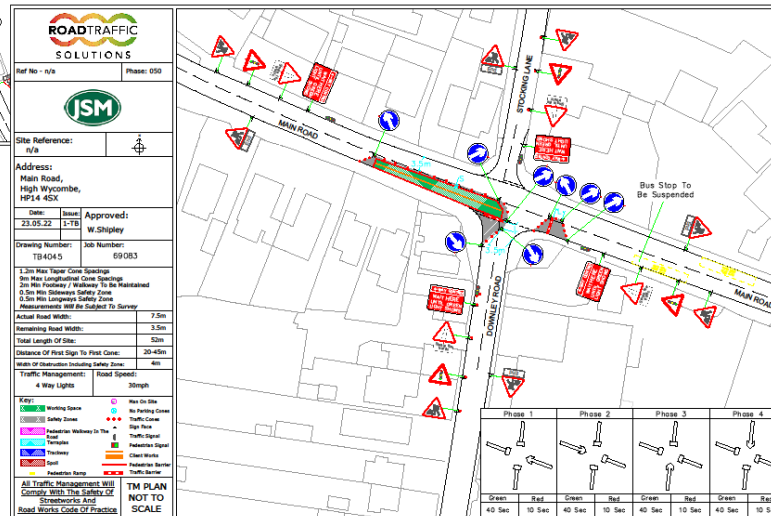
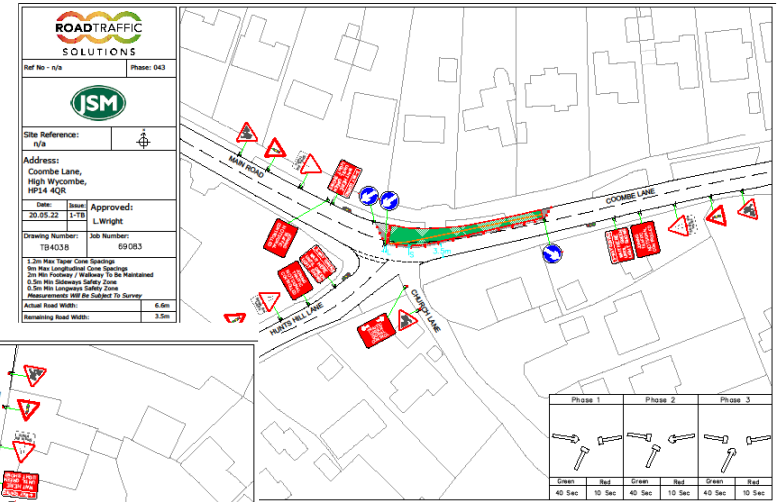
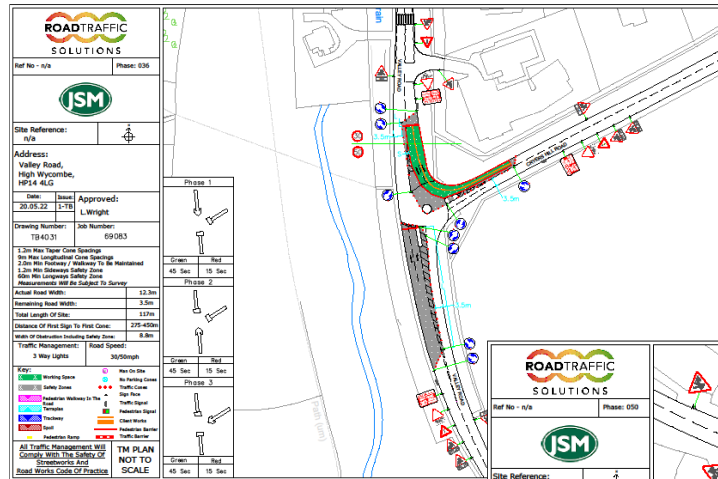
Potential HDD



Traffic Management

Traffic Management supplied & managed by Road Traffic Solutions Ltd

- Multi Phase Lights to be utilised at Junctions (to be agreed)
- Generic Two Way Lights to be used between Junctions



Traffic Management (examples)



Programme (Key Dates)

- Variable Messaging Signs (VMS) Information Boards / Advance Notification Signs = 4 Weeks prior to start date
- Letter Drops = 2 Weeks prior to start date
- Proposed Start Date (Duct Install) = January 2023
- Proposed Start Date (Cable Install /Jointing) = January 2024
- Energisation = August 2024
- Site Clear/Demobilisation = September 2024

*Program based on five excavation teams

Public Relations

- Letter Drops (with JSM contact details)
- Public Meetings
- VMS Displays on Traffic Sensitive Roads
- Advance Warning Signs on non Traffic Sensitive Roads



IMPORTANT INFORMATION

Dear Owner/Occupier

RE: Expansion of the Zayo Telecommunications Network

Please be advised that JSM Construction will be carrying out section 81 frame and cover repair on **(ROAD NAME)** from **(locations)** on **(date of works)** 2022.

This work is being carried out with the permission of the Local Authority's Highway Department and the Traffic Police and is in strict accordance with the New Roads & Street Works Act 1991.

We would like to apologise in advance for any inconvenience that these essential works may cause and I can assure you that we will endeavour to keep disruption to the absolute minimum, whilst passing your property as quickly as possible.

Since our inception Zayo has been granted numerous awards by local authorities for consideration and care in contracting.

May we thank you in advance for your co-operation and should you require any further information regarding these works please contact our agent on site our Head Office Or; 01992 788 019.



Thank you
Any questions?