

Project Proposal

Standby Generator Variation
Vectura House

Presented by: Kirk Kirkland



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Richard Emmerson-Pink
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Vectura: Standby Generator

Dear Richard,

Thank you for allowing CBRE the opportunity to quote for the Standby Generator for Vectura House at Vectura Chippenham.

This proposal will act as a variation to the current generator works on units 5-6. Our proposal and price should, however, be read in conjunction with this covering letter, scope of works and the list of assumptions and clarifications listed below.

Our offer shall remain open for a period of 30 days from the date hereon. However, should through no fault of our company, the contract extends beyond the firm price period, we reserve the right to amend our figure accordingly.

The purpose of this proposal is to summarize the project and describe the scope of work and pricing that has been put together by CBRE.

We look forward to being a key partner to you and your team in supporting your facility needs. We will follow up with you to further discuss this proposal and encourage you to reach out with any questions.

Sincerely,

Kirk Kirkland
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Executive Summary

This document has been compiled to demonstrate to the client and his team our proposal to carry supply and install a standby generator for Units 5-6 at Vectura Chippenham. Hopefully you will be able to determine that we have provided a cost effective solution based upon our understanding of the project brief we have received.

We feel this is a great project and an ideal chance to showcase the experience and expertise within the CBRE project team.

The projects team was created to compliment the other services offered by CBRE and thus provide clients with a highly flexible, experienced and safe catalyst for their individual project requirements. Our aim is to provide a competent project management and delivery service delivering a project beyond expectation.

CBRE understand the importance of this project, the environment and client expectations. It will be our focus and aim as a team to ensure the client remains at the forefront of our efforts and ensure that whatever happens, the day to day activities of the facility and tenants are not affected. This will only become achievable by coordination, recognising and negating risk and by operating in an adaptable manner.

We very much look forward to having the opportunity to work with you on this project.

Should you have any questions or should this document not have covered any items you have requested we would be delighted to offer further clarity and explanation at a post tender interview or via follow up documentation.

1. CBRE Project Management

At CBRE, we pride ourselves on being the 'one stop shop' delivering Projects from a clear scope of works and high quality projects service on time and on budget. Our project management service is focused on risk management and maintaining clear paths of communication throughout.

During the lead in phase our project team will take time to familiarise themselves with the site and ensure they are fully conversant with any access issues, security, health and safety requirements and the areas we will be accessing and working within and around. This is to help maintain a smooth and effective installation and support the key stakeholders be more conversant with the works and any issues that may impact the works.

Whilst the project is live the Project Manager will remain in constant communication with the client and client's team. Our no surprise approach will be facilitated by pre contract, weekly meetings and post contract meetings in which we will table project progress, provide up-dated programs and review both risk and commercial aspects of the project. This meeting can be tailored to meet any other requirements the client may also have.

Once the project is complete the Project Manager will collate all information including operation and maintenance files, manage the final account, and handover the equipment to the clients team and facilities people. We shall ensure that all snagging works are complete and that the training has taken place along with ensuring that a final debrief meeting is taken place with the facilities team and collate any lessons learned from the delivery of the project.

Our 'one team; least disruption' approach will see our Project Manager working with the BAU team in the issuing of permits and escort duties, sealing off and opening up of work areas, and the carrying out of isolations. The Project Manager will run the project and control the implementation of the works into the operation and maintenance regime.

The CBRE Project Manager will bring the added value of being able to co-ordinate between the site team, sub-contractors, client, allowing the site team and client to continue with the day to day running of the building. The CBRE Project team will effectively co-ordinate a smooth delivery of the project without any disruption to the day to day operation of the building.

2. CBRE Supply Chain

We have a Supply Chain focused on providing safety, quality and maintaining value. We have preferred supplier agreements in place with over 200 best-in-class suppliers. All of the suppliers utilised for this project are taken from our preferred supplier list.

To become a Preferred Supply Partner, the following needs to be demonstrated.

- Ability to deliver
- Responsiveness
- Capacity and flexibility
- Investment in their people
- High standards of Health, Safety, Quality & Environmental performance
- Commitment to Corporate Social Responsibility
- Sustainable procurement in their own supply chain
- Compliance with all appropriate legislation

3. Scope of Works

Our proposal is based upon the following:

Supply and Install

1. Kohler 350kVA Generator with 10 hour autonomy at 75% load
 - a. 350 kVA Standby 318 kVA Prime Volvo TAD1341GE engine Water jacket heater Electronic governor Kohler alternator AVR APM 403 local/remote start Volt free pack fixed 4 pole circuit breaker M228 acoustic, weatherproof housing 81 dBA @ 1 mtr 71 dBA @ 7 mtrs Base fuel tank 470 litres 10 hours autonomy at 75% load Fully bundled Dims 4.48x1.41x2.30 including bund tray 24 months,2500 hours warranty, whichever occurs first.
 - b. Generator Earth Rod
2. Automatic Transfer Switch
 - a. ATS 400amp Wall mounted panel Powder coat RAL7035 Finish Secondary screening to switchgear Segregation between control and switchgear Socomec motorised changeover switch with emergency manual override Deep Sea 334 controller Deep Sea 160 self-seeking PSU Auxiliary 230VAC Output (battery charger etc) All necessary terminals and fuses Wiring diagram Volt free contacts for Mains healthy Mains failed Generator on load Mains on load Common alarm
 - b. 600mm Ladder Rack Containment
 - c. Generator Earth Rod
 - d. AWA Single Conductors from Generator to ATS
3. Alterations to existing Main Switch
4. Civils/Enabling Works
 - a. Generator base / ground alterations
 - b. Alterations to exiting timber fencing
 - c. Relocate bike rack

- d. Remove and reinstate fire alarm on bin store
- 5. Bulk Fuel Tank - 2000 Litres, Autonomy 31 hours @ 75% variable load
Autonomy 31 hours @ 75% variable load Steel sheet construction Tank in tank design to current PPG2 regulations Integral lockable fill cabinet c/w Fuel gauge Fuel fill 2" Breather 2" Battery bund alarm Non return valve Fuel isolation valve Feed and return spigots 5 metres of flexible steel armored fuel lines, Generator base tank will not be used.
- 6. Fuel Fill
 - a. 470l
- 7. Additional Fuel
 - a. 1530l
- 8. Remove and reinstate fire alarm on bin store
- 9. 2 x Advanced monitoring for each Generator
 - a. 24/7 web-net monitoring
 - b. Generator controller upgrade for monitoring

4. Price Breakdown

Element/Works Package	Price	
Project Manager	£	
Site Supervision	£	
Technical Manager	£	
Fire Alarm Alterations	£	
Generator Works Package	£	
Civils Works Package	£	
Generator 24/7 Web Monitoring	£	
Generator Controller Upgrade	£	
Contract Sum (Excluding VAT)	£	£

5. Methodology & Logistics

All works will be completed during normal working hours: 0800hrs to 1700hrs Monday to Friday (excluding Public Holidays).

Works will commence on as soon as possible and will be coordinated with the other project works. This work can be adjusted according to Vectura requirements.

There is a 2 week delivery time for the generator and are still awaiting lead times for the switchboard / panel building.

All civils works/enabling works will be complete prior to having the generator delivered to site. The Switchboard / panel build will be complete last before testing and commissioning.

6. Programme

We envision this will take 7 weeks from start date on site

Start Date: TBC

End Date: TBC

7. Technical Clarifications

Standard of Care

We shall exercise in the performance of our obligations all the reasonable skill, care and diligence expected of a contractor experienced in carrying out work of a similar scope, nature, size and complexity to this offer.

Demonstration

Our quotation allows for a demonstration of the works to provide reasonable and adequate proof of the effectiveness of system operation, providing a comprehensive signing off procedure. This demonstration would be undertaken as part of the “soft landings” handover/meeting.

Beneficial Use

Beneficial use of any part of our works prior to practical completion other than for its own commissioning and demonstration will be at our sole discretion.

Delivery and Materials

We shall carry out the works in a good and workmanlike manner using materials, as and where specified, or of an appropriate quality for their respective purposes.

Contractor Selection

CBRE are proposing to use specialist sub-contractors to carry out the decommissioning, removal and installation of the new plant and materials.

Hazardous Materials

Based on the surveys and information made available to CBRE, we do not anticipate the presence of any hazardous materials (including asbestos or asbestos containing materials). If during the course of delivering the project CBRE suspect the presence of any hazardous materials we will notify you and the responsibility for the identification, disturbance or removal of hazardous materials, or materials containing hazardous materials shall be carried out by appropriately Licensed Contractors, who remain fully responsible and liable for the works.

Our offer has not included any provision due to hazardous materials being suspected or identified. We will notify you of any changes required to the programme and our price that will be managed as a variation to the contract.

Commissioning

Commissioning will be undertaken during a timescale to be agreed and written into the programme of works. Should the agreed timescale cease to be accommodated within the contract period for reasons beyond our control, commissioning will be completed thereafter. We shall be exempt from any liability for damages for delay including but not limited to liquidated and ascertained damages as a result of such delay.

Training

Our quotation does not allow for any training of client personnel.

Defects Liability

We undertake to rectify defects to our works for a period of 6 months from the date of practical completion or commencement of beneficial use whichever is the earlier. This undertaking is subject to the works and the associated plant being maintained in accordance with manufacturers' recommendations.

Record Drawings and Operation & Maintenance Manuals

We undertake to provide one copy of the 'As Installed' Drawings and Operation & Maintenance Manuals following completion of commissioning of our works.

Spares & Maintenance

We have not included within this proposal for the cost of Spares and Maintenance. A separate proposal for this element may be presented if required.

Assumptions, Exclusion & Qualifications:

- Works to be completed inside of normal working hours only, out of hours is excluded for all aspects of the works, refer to tender documentation further details regarding access / egress.
- No allowance has been made for client requested stoppages or delays in the work as a result of noise as consequence of our works.
- Our programme of works has been based upon you providing CBRE with uninterrupted and unhindered access to complete the works in line with our continuous programme of works.
- Our price does not include for any stoppages or delays caused as consequence of environmental factors including but not limited to adverse weather, nesting birds and reserve the right to review our pricing should these factors impede or cause delay to our works.
- Provision of welfare is excluded.
- Any Sprinkler works is excluded.
- Any Fire Alarm Works is excluded.
- Any Security System Works is excluded.
- Any HVAC Works is excluded.
- Cost to upgrade incoming supply is excluded.
- Supply & Installation of AFDD is excluded.
- Upgrading of main bonding conductors, if required is excluded.
- Our price is based upon you providing full parking and unhindered access for deliveries to CBRE and our contractors and delivery partners.
- No allowance has been made for working with or the removal of Asbestos if found during the works and this is expressly excluded from the scope of works.
- CBRE are not responsible for any existing installation outside of the scope of works it is assumed that the existing installation is suitable to disconnect, where required.
- We have made no allowance within our price offer for liquidated damages.
- We will review and record the condition of the existing building fabric and mechanical, electrical and plumbing equipment and accept no responsibility of any damage caused prior or during the programme of the project due to any existing latent defects or underlying conditions with the building. We have assumed the building is in good condition for us to undertake our works and should we discover any defects prior or during the works we reserve the right to review our pricing accordingly.
- Our price does not include for the seeking of public authority approvals, landlord consent or planning permissions.
- All works will be carried out in accordance with the CBRE Standard Contract for Project Works.

8. Commercial Clarifications

Form of Contract: CBRE Standard Terms & Conditions for Project Works

Payment schedule:

Each proposed application for payment (AFP) will be evaluated and agreed with the Vectura Limited responsible person prior to the actual invoice being raised and issued.

9. Tender Clarifications

Not Applicable

10. Risks & Hazards

RISK	MANAGEMENT & MITIGATIONS (IF ANY)	OWNERS
Electrical Working	Approved Safe Systems of Works/RAMS, Full time supervision, competent operative	CBRE
Power Down	Scheduled in shutdowns, approved Safe Systems of Works/RAMS, Full time supervision, competent operative	CBRE, Vectura
Lifting operations – Delivery of Generator	Approved Safe Systems of Works/RAMS, Full time supervision, lifting equipment test/inspection certs.	CBRE

11. Appendices

Appendix 1 - Generator

KOHLER.**Industrial Diesel Generator Set – V350C2**
50 Hz

RATINGS 400 V - 50 Hz		
Standby	kVA	350
	kWe	280
Prime	kVA	318
	kWe	254

**Benefits & features****KOHLER premium quality**

- Design offices using the latest technical innovations
- Modern fully certified factories
- A cutting edge laboratory
- The generating set, its components and a wide range of options have been fully developed, prototype tested, factory built, and production tested
- Approved for use with HVO (Hydrotreated Vegetable Oil) according to EN15940

KOHLER premium performances

- Optimized and certified sound levels
- Reliable power, even in extreme conditions
- Optimized fuel consumption
- Compact footprint
- Best quality of electricity, high starting and loading capacity, according to ISO8528-5
- Robust base frames and high-quality enclosures
- Protection of installations and people
- Approved in line with the most stringent standards

Engines

- Premium level engines, in-house or from strong partners
- High power density, small footprint
- Low temperature starting capability
- Long maintenance interval

Alternator

- Provide industry leading motor starting capability
- Made in Europe
- Built with a class H insulation and IP23

Cooling

- A compact and complete solution using a mechanically driven radiator fan
- Designed or optimized by KOHLER
- High temperature and altitude product capacity available

Base frame and enclosure

- High quality steel with enhanced corrosion resistance
- Highly durable QUALICOAT-certified epoxy paint
- Minimum 1000 hours of resistance to salt spray in accordance with ISO12944
- Ergonomic access to allow easy maintenance and connection of the generator
- Robust design optimized for transportation

GENERAL SPECIFICATIONS

Engine brand	VOLVO
Alternator commercial brand	KOHLER
Voltage (V)	400/230
Standard Control Panel	APM403
Optional control panel	APM802
Optional Control Panel	M80-D
Optional control panel	Terminal block
Consumption @ 100% load ESP (L/h) *	70
Consumption @ 100% load PRP (L/h) *	63
Emission level	Emission optimization - Stage II
Type of Cooling	Compliant Radiator
Performance class	G3

GENERATOR SETS RATINGS

	Voltage	PH	Hz	Standby Rating			Prime Rating	
				kWe	kVA	Amps	kWe	kVA
V350C2	415/240	3	50	280	350	487	254	318
	400/230	3	50	280	350	505	254	318
	380/220	3	50	280	350	532	254	318
	200/115	3	50	280	350	1010	254	318
	240 TRI	3	50	280	350	842	254	318
	230 TRI	3	50	280	350	879	254	318
	220 TRI	3	50	280	350	919	254	318

DIMENSIONS COMPACT VERSION

Length (mm)	3160
Width (mm)	1340
Height (mm)	1805
Tank capacity (L)	470
Dry weight (kg)	3103

DIMENSIONS SOUNDPROOFED VERSION

Type soundproofing	NOT AVAILABLE
Length (mm)	4475
Width (mm)	1410
Height (mm)	2430
Tank capacity (L)	470
Dry weight (kg)	4035
Acoustic pressure level @1m in dB(A) 50Hz (75% PRP)	77
Acoustic pressure level @7m in dB(A) 50Hz (75% PRP)	67

* Volumetric Fuel consumption is up to 4% higher when using HVO than

Reference Conditions: 25°C Air Inlet Temperature, 40°C Fuel Inlet Temperature, 100 kPa Barometric Pressure; 10.7 g/kg of dry air Humidity. Intake Restriction set to maximum allowable limit for clean filter; Exhaust Back pressure set to maximum allowable limit; Fuel density at 0.85 kg/L.

Data was taken from a single engine test according to the test methods, fuel specification and reference conditions stated above and is subjected to instrumentation and engine-to-engine variability. Test conducted with alternate test methods, instrumentation, fuel or reference conditions can yield different results. Data and specifications subject to change without notice.



M228

Soundproofing canopy

STANDARD FEATURES

- ➔ They protect stationary and mobile generator against the bad weather, against the theft and enables the reduction of the noise level.
- ➔ Enclosures are of 12 gauge steel. Steel sheet are electro zinc coated before painting (inside and outside) with a polyester powder rust inhibiting coat .
- ➔ High corrosion resistance: stainless covered with zinc, bolts and rivets, anodized aluminium alloy hinges flexible seals between body sections.
- ➔ Soundfoam between 20 and 50 mm (1 to 2 in) acoustical sound treatment
- ➔ Lifting eye(s) on top of the enclosure fixed to the skid
- ➔ Large doors allow easy access to the generator set for service and monitoring purposes
- ➔ Window in “securit” glass mounted on enclosure door for control viewing .
- ➔ A critical silencer is mounted inside the enclosure
- ➔ Emergency stop button is accessible from outside enclosure.



Model	Sound level			Dimensions	Weight	Tank
	dB(A)@1m	dB(A)@7m	LWA	(mm)	(kg)	(L)
V350C2	81	71		4475 x 1410 x 2430	4035	470

Thank you.



Please contact me if you have any questions or comments regarding this proposal. CBRE will await receipt of a purchase order to take further action.

**Kirk
Kirkland**

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