

STOCKYARD HILL WIND FARM

33kV Transmission Line Bushfire Mitigation Plan

2023-2024

Electricity Safety (Bushfire Mitigation) Regulations 2023

June 2023

Document Control – SH-PM-PLN-0012

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Revision 2	20/07/22	Updated Plan for 2022-2023	Jeff Bembrick Talak Mohammed	
Revision 3	27/6/2023	Update to new regulations, review general content, update personnel and	Camille Maclean	Jason Marnell
Revision 4	4/10/23	Updated with changes requested from ESV evaluation	Camille Maclean	Jason Marnell
Revision 5	20/10/2023	Further updates addressing ESV's final revision assessment	Jon Valent	Jason Marnell

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Terms and Definitions

Bushfire	Is an unplanned fire. It is a generic term that includes grass fires, forest fires and scrub fires.
Bushfire Protection Areas	Are areas that have been declared as general, medium or high fire risk by local governments and Planning VIC
Bushfire Safer Places	A Bushfire Safer Place is a place of relative safety. It may be used as a first resort for those people who have planned to leave high risk locations early on a bad fire day
Bushfire Survival Plan	Is a plan that enables the department sites to respond effectively to a day of high bushfire danger or a bushfire emergency.
Emergency Services	Means the Country Fire Authority CFA; State Emergency Service SES; Victorian Ambulance Service and Victorian Police responsible for coordinating / combating fires and other local emergencies.
Competent Person'	Means a person who has acquired through training, qualification or experience the knowledge and skills to carry out the task.
Dynamic Risk Assessment	Means the continuous assessment of risk when there are rapidly changing circumstances in order to implement the control measures necessary to ensure an acceptable level of safety.
Employee	For this procedure, Employee refers to Goldwind Australia workers, Contractors and Service Providers.
Fire Ban Districts	Victorian Districts can be found on the CFA Fire Ban web site.
Fire Danger Rating	This forecast is issued by the Bureau of Meteorology each day and is an early indicator of the potential danger, should a bushfire start. The higher the Fire Danger Rating, the more dangerous the fire conditions are.
Hazardous bushfire risk area	The area assigned by the CFA under section 80 of the Act

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1 Introduction

This Bushfire mitigation Plan has been prepared in response to the Electricity Safety (Bushfire Mitigation) Regulations 2023 - Reg 6 Prescribed Particulars for Bushfire Mitigation Plans—Specified Operators. It covers all aspects of the regulations for the 33kV overhead transmission line forming part of the Stockyard Hill Wind Farm (SHWF) internal collector network.

This line is owned and operated by Stockyard Hill Wind Farm Pty Ltd (SHWFPL). Goldwind Australia has been engaged as the Warranty Operations and Maintenance Contractor for the Wind Farm.

The Project is located within the Pyrenees Shire, approximately 150 km north-west of Melbourne and approximately 35 km west of Ballarat as shown in Figure 1-1 . The site spans parts of the Victorian Volcanic Plain and the Central Victorian Uplands bioregions and is located within the jurisdiction of the Glenelg Hopkins Catchment Management Authority (CMA). The WEF site extent comprises approximately 109.5 km² and is generally bound by Eurambeen-Streatham Road and Beaufort-Carranballac Road to the west, Stockyard Hill Road and Mt Emu Settlement Road in the south, Mount Emu Creek in the east and Ballyrogan Road, Long Gully Road and Dalgleishs Road in the north. Skipton Road runs north south and bisects the subject site. The land where the line is located is privately owned and leased by SHWFPL for the wind energy facility purpose.

The primary use of the site is agriculture with the majority cultivated for grazing and cropping. The site has a long history of agricultural use and accordingly is highly modified with little remnant vegetation remaining on the site.

The Wind Farm consists of four clusters of turbines being the western, eastern and southern groups each with a 33kV/132kV collector substation and a 33kV transition station in the North Group. The internal 33kV OHL of approximately 10.7 km length connects the North Transition Station to the West Substation (Figure 1.2).

External 132kV Overhead Transmission Line (OHL) connect the Project’s Turbine Groups to the Haunted Gully Terminal Station. The 132kV lines and Terminal Station are owned and operated by AusNet Services and are not addressed by this Plan.

There were no fires on site due to the at-risk line at SYHWF and no exemptions were requested from ESV or issued by ESV.

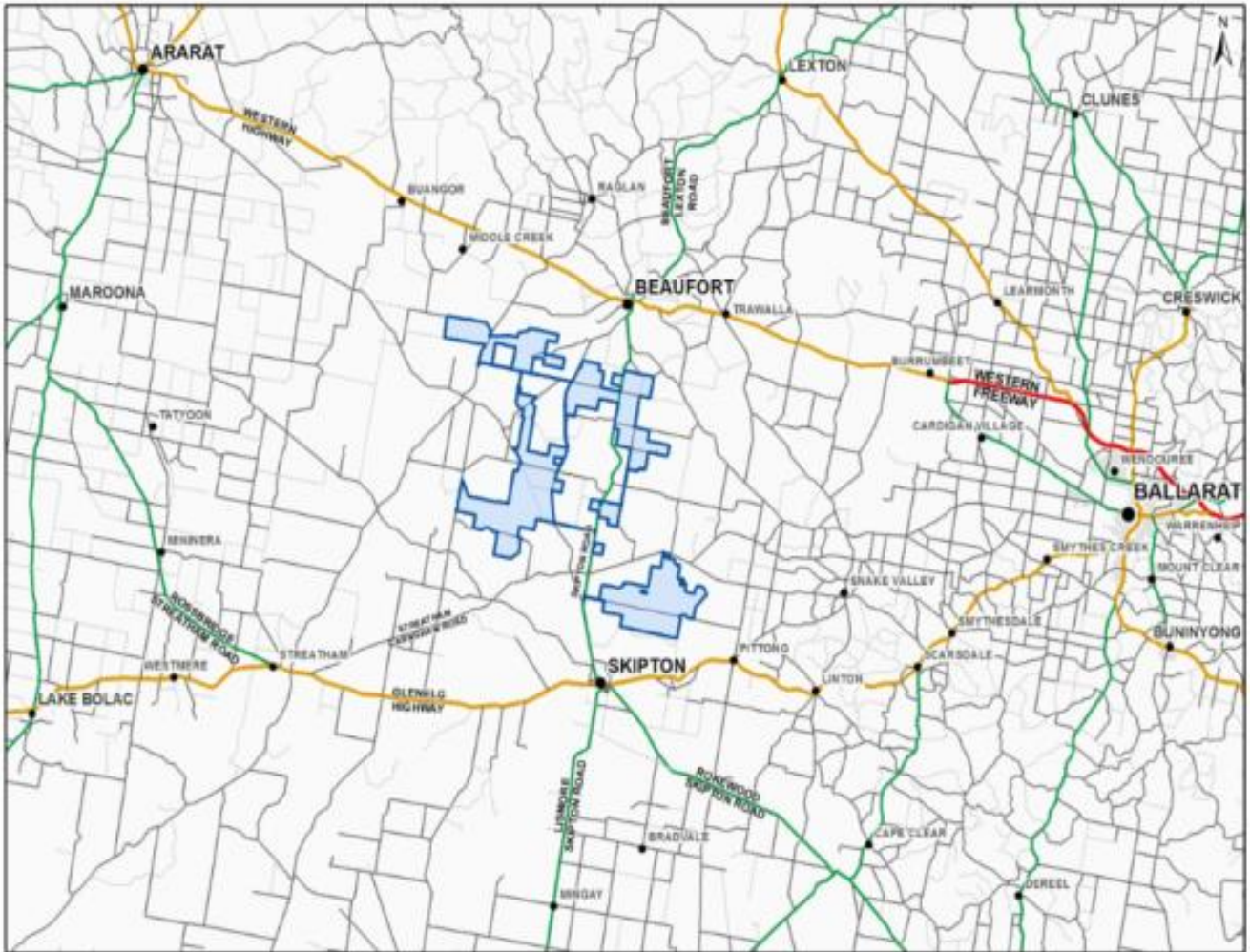


FIGURE 1-1 Site locality plan

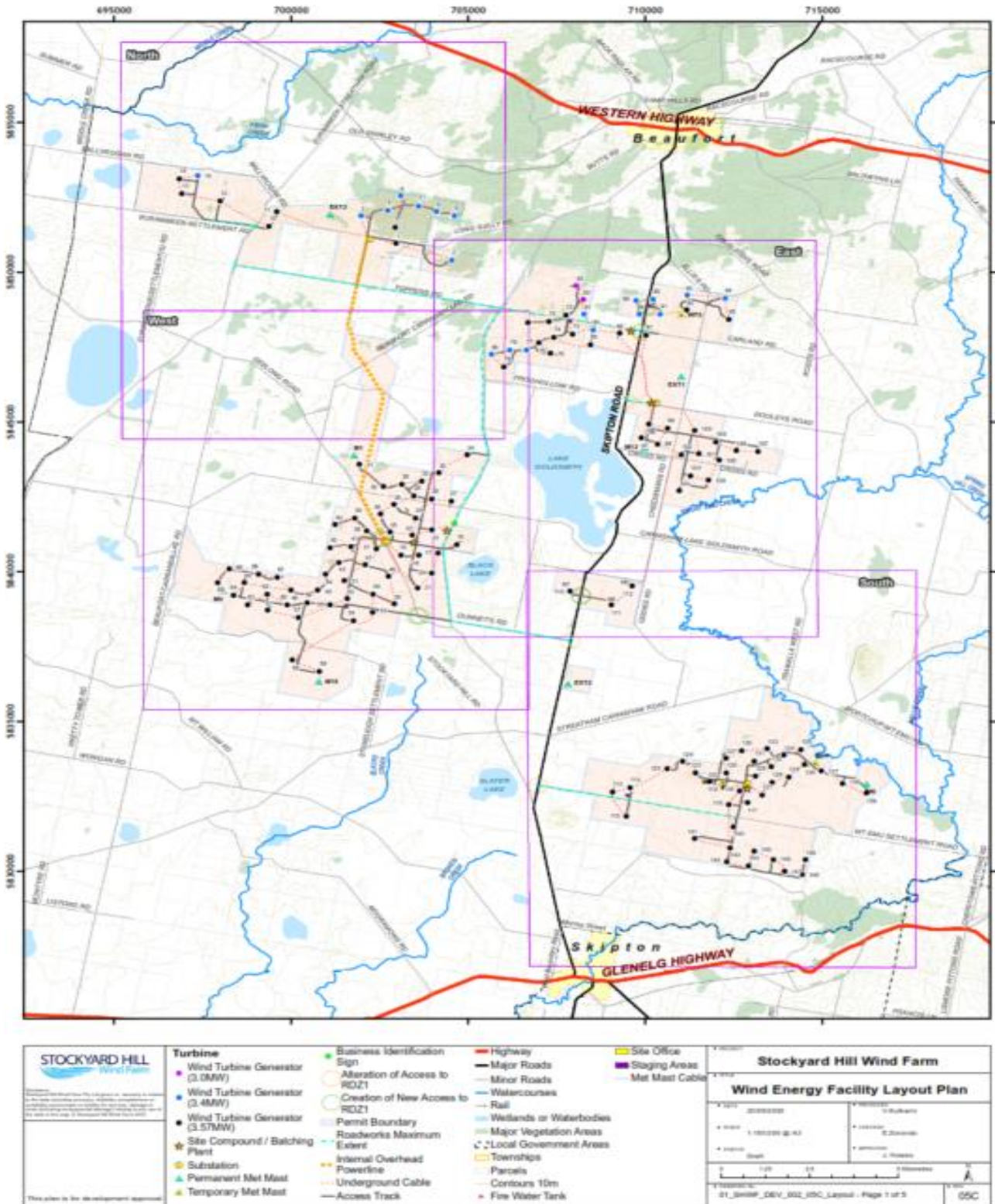


FIGURE 1-2 MAP OF THE WIND FARM

2 Regulation requirements

The structure of provisions of the Electricity Safety (Bushfire Mitigation) Regulations 2023, is shown below. This Plan responds to requirements of Clause 6 (applicable to specified operators)

Electricity Safety (Bushfire Mitigation) Regulations 2023

S.R. No. 40/2023

TABLE OF PROVISIONS

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This Plan has been prepared to address each requirement of Regulation 6 (a-o) Prescribed particulars for the bushfire mitigation plans – specified operator under the Electricity Safety (Bushfire Mitigation) Regulations 2023 listed in Table 2.1 below.

Table 2.1 Prescribed particulars for the bushfire mitigation plans – specified operator

Regulation 6	Requirement	Section found in this plan
(a)	the name, address, email and telephone number of the specified operator;	Section 2
(b)	the position, address, email and telephone number of the person who was responsible for the preparation of the plan;	Section 2
(c)	the position, address, email and telephone number of the persons who are responsible for carrying out the plan;	Section 2
(d)	The email address (if any) and the telephone number of the specified operator's control room so that persons in the room can be contacted in an emergency that requires action by the specified operator to mitigate the danger of bushfire;	Section 2
(e)	the bushfire mitigation policy of the specified operator to minimise the risk of fire ignition from its at-risk electric lines;	Section 4
(f)	the objectives of the plan to achieve the mitigation of fire danger arising from the specified operator's at-risk electric lines;	Section 5
(g)	a description, map or plan of the land to which the bushfire mitigation plan applies, identifying the location of the specified operator's at-risk electric lines;	Section 6
(h)	the preventative strategies and programs to be adopted by the specified operator to minimise the risk of the specified operator's at-risk electric lines starting fires;	Section 7
(i)	a plan for inspection that ensures that all of the specified operator's at-risk electric lines are inspected at regular intervals of no longer than 37 months;	Section 8
(j)	details of the processes and procedures for ensuring that each person who is assigned to carry out the inspections referred to in paragraph (i) has satisfactorily completed a training course approved by Energy Safe Victoria and is competent to carry out such inspections;	Section 9
(k)	details of the processes and procedures for ensuring that persons (other than persons referred to in paragraph (j)) who carry out or will carry out functions under the plan are competent to do so;	Section 10
(l)	the operation and maintenance plans for the specified operator's at-	Section 11

	<p>risk electric lines —</p> <ul style="list-style-type: none"> (i) in the event of a fire; and (ii) during a total fire ban day; and (iii) during a fire danger period; 	
(m)	<p>the investigations, analysis and methodology to be adopted by the specified operator for the mitigation of the risk of fire ignition from its at-risk electric lines;</p>	<p>Section 12</p>
(n)	<p>details of the processes and procedures by which the specified operator will—</p> <ul style="list-style-type: none"> (i) monitor the implementation of the bushfire mitigation plan; and (ii) audit the implementation of the plan; and (iii) identify any deficiencies in the plan or the plan's implementation; and (iv) change the plan and the plan's implementation to rectify any deficiencies identified under subparagraph (iii); and (v) monitor the effectiveness of inspections carried out under the plan; and (vi) audit the effectiveness of inspections carried out under the plan; 	<p>Section 13</p>
(o)	<p>the policy of the specified operator in relation to the assistance to be provided to fire control authorities in the investigation of fires near the specified operator's at-risk electric lines.</p>	<p>Section 14</p>

3 Reg 6 (a-d) Contacts Details

(a) The name, address and telephone number of the specified operator is:

Name: Stockyard Hill Wind Farm Pty Ltd ACN: 118 119 501
Address: Level 4, 485 La Trobe Street Melbourne Vic 3000
Telephone Number: 03 9912 7853

(b) The position, address and telephone number of the person who was responsible for the preparation of the plan;

Name: Camille Maclean
Position: HSEQ Manager - Service
Address: Goldwind Australia Pty Ltd Level 4, 485 La Trobe Street MELBOURNE VIC 3000
Mobile: +61 0407 770 119
Email: camillemaclean@goldwindaustralia.com

(c) the position, address and telephone number of the persons who are responsible for carrying out the plan;

Name: Jason Marnell
Position: Site Manager
Address: 1474 Stockyard Hill Road, Stockyard Hill, 3373
Telephone Number: 03 8527 0760 Mobile: +61 455 668 496 Email: jasonmarnell@goldwindaustralia.com

(d) The telephone number of the specified operator's control room for contact in an emergency that requires action by the specified operator to mitigate the danger of a bushfire is detailed below:

In case of an emergency the following person should be contacted in the first instance. This contact phone number is accessible 24 hours, 7 days a week.

Name: Jason Marnell
Position: Site Manager
Address: 1474 Stockyard Hill Road, Stockyard Hill, 3373
Telephone Number: 03 8527 0769 Mobile: +61 0429 601 118 Email: jasonmarnell@goldwindaustralia.com

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4 Reg 6 (e) Bushfire Mitigation Policy

SHWFPL ensures assets are operated and maintained to:

- deliver safe, effective and reliable services
- protect and improve the environment
- meet agreed financial performance targets for the government and the wider community; and
- minimise the risk of fire ignition by high voltage power lines.

SHWFPL Emergency Management Plan articulates the organisation’s commitment to emergency management, including fire. It outlines emergency management objectives to:

- Prevent or reduce the risks of incidents occurring
- Maintain welfare and confidence of our people, customers, stakeholders and the community
- Minimise the impacts of a disruption
- Ensure that critical stakeholders are kept informed
- Return to normal operations as quickly as possible.

This bushfire risk management plan identifies assets at risk from bushfire and programs to mitigate that risk. The at-risk 33kV transmission line addressed by this Plan comprises:

- A 33kV transmission line of approximately 10.7 km in length;
- The line route is between the SHWF West Substation and SHWF North Transition Station
- The line has 43 pole structures (galvanized steel poles braced by stay wires. There are 3 types of pole structure used, as shown in Appendix A). Foundation is direct embedment with concrete/stabilized sand backfill.
- Structure heights vary from approximately 19m to 25m and spacing varies from 9m to 318m
- The line is a single circuit line, comprising three separate conductors (each a separate phase), separated from the structures by insulators. An Optical Ground Wire (OPGW) is above the conductors and secured to top of the pole structures. It protects the conductors from lightning and provides internal communications within part of the wind farm.

This Plan applies to all land for the OHL, within a High Bushfire Rated Area (HBRA). The locations of the pole structures and earth stakes are shown in Section 6. Southern and northern structures are shown in Plates 4.1 to 4.4. In determining risk and risk management the international standard for risk management, ISO 31000:2018 is used. Local plans and procedures in the Wind Farm’s Emergency Response Plan provides governance in the management of fire risk from power lines.



Plate 4.1 –
Southern landing
structure for 33kV
line, at Western
Substation



Plate 4.2 – Pole
structures south of
North Transition
Station



Plate 4.3 – Pole
structures at
Northern Transition
Station, northern
extent of line

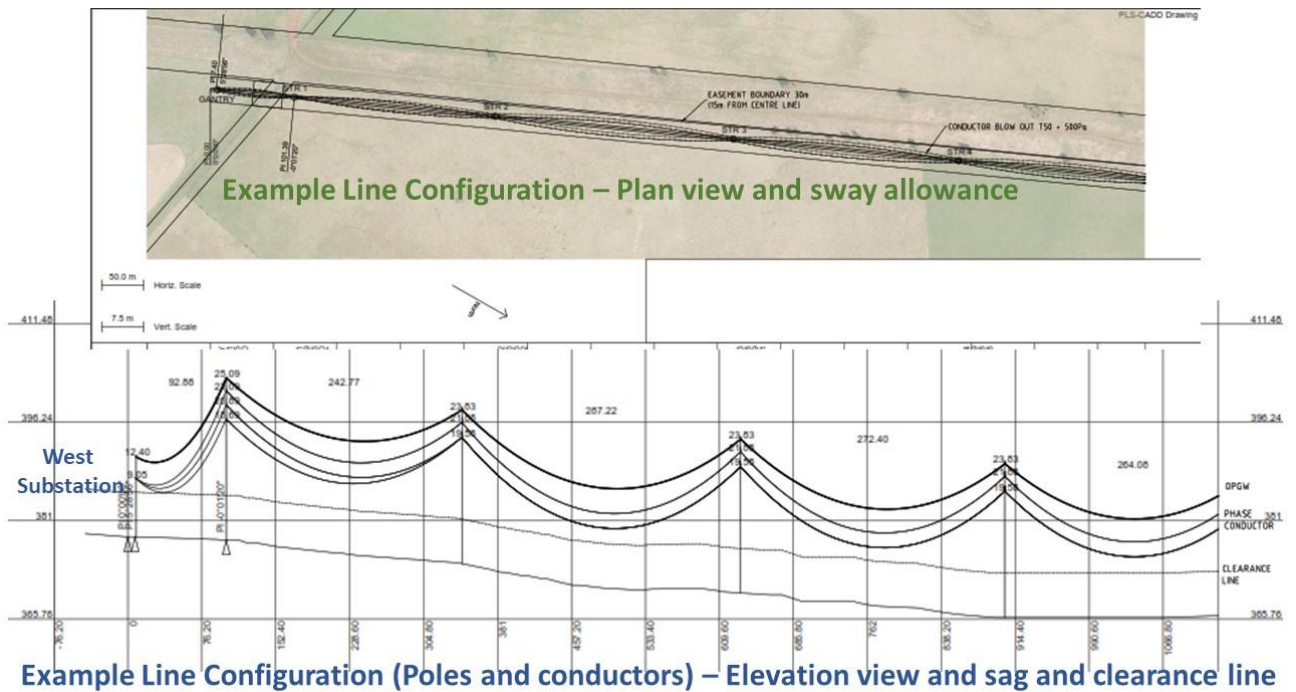


Plate 4.4 – Example Plan and Elevation Views of Line and Clearance considerations

The example figures indicate the line features that need to be considered for ensuring adequate clearances from surrounding vegetation and limiting potential for ignition of the vegetation.

- **Sway** is indicated in plan view inset in Plate 4.4 and is maximum mid-point between structures. The extent of sway is affected by wind conditions and temperature
- **Line sag** is affected by temperature, partly due to weather and in part associated with loading of the line. The example elevation figure shows the clearance line that needs to be maintained.

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5 Reg 6 (f) Plan Objectives

The Bushfire Mitigation Plan has been developed to identify possible electrical causes of fire from the SHWF 33kV Transmission Line between the Western and Northern Turbine Groups and, to reduce the likelihood and consequences of these risks through the implementation of various preventative measures.

The following Legislative and Regulatory requirements provide guidance on how to minimize bushfire risks from the at-risk electric line identified in this Plan:

- Section 83B of the Electricity Safety Act 1998,
- Section 84D of the Electricity Safety Act 1998 and
- Regulation 6 of the Electricity Safety (Bushfire Mitigation) Regulations 2023
- Regulation 9 of the Electricity Safety (Electric Line Clearance) Regulations 2020
- SHWF Electric Line Clearance Management Plan (ESV Approval 16 May 2022)

The SHWF Electric Line Clearance Management Plan has been separately prepared by SHWFPL and will be maintained as necessary to ensure safe operation of the line. It shows additional information with respect to inspections and clearance activities.

6 Reg 6 (g) At risk electric line description and map

The at-risk line consists of tall, galvanized steel poles braced by guy wires, with three 33kV conductors (one for each electrical phase) strung between the poles and above these, an earth wire strung between the top of successive poles.

The Plan applies to land within a High Bushfire Rated Area (HBRA).

The year of installation of the OHTL is 22/05/2021 (Source: GWA-PM-FRM-0013 Electrical Handover Certificate for MDR-OHTL).

Optical Ground Wire conductor (OPGW) is used for the OHTL (Source: 3942-934-001 | Rev02 Overhead Line Design Criteria Basis of Design). There is a total of 43 poles within the 10.7km route with elevations of 19.29m to 25.09m above finished surface level.

GPS coordinates of all the poles and stays are tabulated within the Project drawings (SHWF-000-E11-0300 (3942-920-0001)) and copied below for easy reference.

The detailed equipment layout plan is provided in the drawings listed in Table 6.1.

Table 6.1 – Drawings for 33kV Line Route - From South (Sheet 2) to North (Sheet 10)

Sheet	SHWF Reference Drawing Number	Structures	Feature	Clearances
1	SHWF-000-E11-0313 (3942-920-0021)	All	Index Map	
2	SHWF-000-E11-0314 (3942-920-0022)	Gantry & 1-5	Southern	
3	SHWF-000-E11-0315 (3942-920-0023)	6 to 9	Wangatta Rd	
4	SHWF-000-E11-0316 (3942-920-0024)	10 to 13		
5	SHWF-000-E11-0317 (3942-920-0025)	14 to 18		
6	SHWF-000-E11-0318 (3942-920-0026)	19 to 24	Beaufort - Caranballac Rd	
7	SHWF-000-E11-0319 (3942-920-0027)	25 to 30		
8	SHWF-000-E11-0320 (3942-920-0028)	31 to 35	Creek crossing	
9	SHWF-000-E11-0321 (3942-920-0029)	36 to 39	Toppers Rd	
10	SHWF-000-E11-0322 (3942-920-0030)	40 to 43	Northern	



Figure 6-1 Location of the Overhead line and poles (Drawing No. SHWF-000-E11-0313 (3942-920-0021))



33 kV OVERHEAD LINE
 STOCKYARD HILL WINDFARM
 CONSTRUCTION SCHEDULE
 CLIENT #: SHWF-000-E11-0300

RJE Doc No: 3942-902-0001
 Revision: 4 (AS-BUILT)
 DATE: 23/06/20

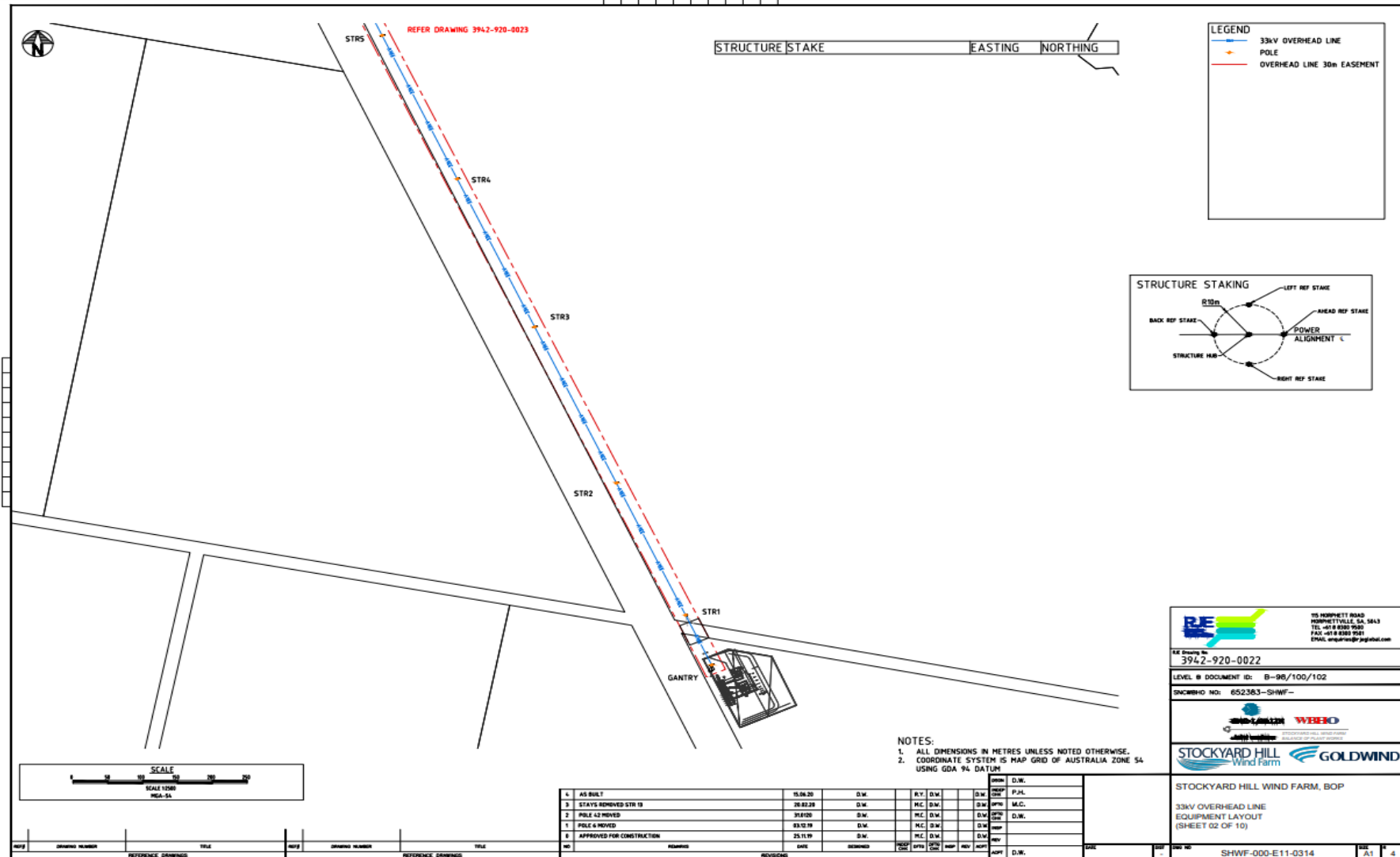
Structure Name	Run Dist (m)	Grd Elev (m)	Act For. Span (m)	Wind Span (m)	WT Span @ T15	Deviation Angle (Degrees)	Burr Ø (m)	Pole Height Above Ground (m)	Footing			Pole Top Arrangement			Conductor		OPGW		Staywire		Phasing		# Dampers per structure / conductor (Damper Type)			Remarks			
									Drawing	Earthing	Pile Ø	Setting Depth / Depth in Footing (m)	Volume Concrete (m³)	Structure Type	GA Drawing	Qty	Arrangement	Qty	Arrangement	Qty	Arrangement	Viewed away from SUB	Qty	Cond	Qty		OPGW		
GANTWAY	8.9	378.5	318.878	47	22	0.0		12.40																					
P1	101.4	378	242.774	168	214	0.0	1.2	25.09	3942-923-0001	3942-926-0001	1.5	4.5	2.0	0100	3942-925-0100	3	3942-922-0001	1	3942-922-0000	2	3942-922-0010 3942-923-0010	OPGW A B C	6	STOCKBRIDGE	4	STOCKBRIDGE			
P2	344.2	374.3	287.221	265	264	0.0	0.9	24.31	3942-923-0001	3942-926-0001	1.2	4.5	1.6	0210	3942-925-0210	3	3942-922-0003	1	3942-922-0021	-	-	OPGW A B C	12	STOCKBRIDGE	8	STOCKBRIDGE			
P3	631.4	369.8	272.402	280	278	0.0	0.9	24.31	3942-923-0001	3942-926-0001	1.2	4.5	1.6	0210	3942-925-0210	3	3942-922-0003	1	3942-922-0021	-	-	OPGW A B C	12	STOCKBRIDGE	8	STOCKBRIDGE			
P4	903.8	366	264.084	268	255	0.0	0.9	24.31	3942-923-0001	3942-926-0001	1.2	4.5	1.6	0210	3942-925-0210	3	3942-922-0003	1	3942-922-0021	-	-	OPGW A B C	12	STOCKBRIDGE	8	STOCKBRIDGE			
P5	1167.9	365.6	305.486	271	283	0.0	0.9	24.31	3942-923-0001	3942-926-0001	1.2	4.5	1.6	0210	3942-925-0210	3	3942-922-0003	1	3942-922-0021	-	-	OPGW A B C	12	STOCKBRIDGE	8	STOCKBRIDGE			
P6	1473.4	362.5	248.384	277	269	0.0	0.9	24.31	3942-923-0001	3942-926-0001	1.2	4.5	1.6	0210	3942-925-0210	3	3942-922-0003	1	3942-922-0021	-	-	OPGW A B C	12	STOCKBRIDGE	8	STOCKBRIDGE			
P7	1721.7	361	279.683	277	272	35.8	1.2	25.09	3942-923-0001	3942-926-0001	1.5	4.5	2.0	0100	3942-925-0100	6	3942-922-0001	2	3942-922-0000	4	3942-922-0010 3942-923-0010	OPGW A B C	12	STOCKBRIDGE	8	STOCKBRIDGE			
P8	2001.4	362	279.362	280	287	0.0	0.9	24.31	3942-923-0001	3942-926-0001	1.2	4.5	1.6	0210	3942-925-0210	3	3942-922-0003	1	3942-922-0021	-	-	OPGW A B C	12	STOCKBRIDGE	8	STOCKBRIDGE			
P9	2281.4	360.9	296.595	288	307	0.0	0.9	24.31	3942-923-0001	3942-926-0001	1.2	4.5	1.6	0210	3942-925-0210	3	3942-922-0003	1	3942-922-0021	-	-	OPGW A B C	12	STOCKBRIDGE	8	STOCKBRIDGE			
P10	2578.0	355	283.172	290	280	0.0	0.9	24.31	3942-923-0001	3942-926-0001	1.2	4.5	1.6	0210	3942-925-0210	3	3942-922-0003	1	3942-922-0021	-	-	OPGW A B C	12	STOCKBRIDGE	8	STOCKBRIDGE			
P11	2861.2	352.1	277.131	280	301	0.0	0.9	24.31	3942-923-0001	3942-926-0001	1.2	4.5	1.6	0210	3942-925-0210	3	3942-922-0003	1	3942-922-0021	-	-	OPGW A B C	12	STOCKBRIDGE	8	STOCKBRIDGE			
P12	3138.3	344.4	301.063	289	266	0.0	0.9	24.31	3942-923-0001	3942-926-0001	1.2	4.5	1.6	0210	3942-925-0210	3	3942-922-0003	1	3942-922-0021	-	-	OPGW A B C	12	STOCKBRIDGE	8	STOCKBRIDGE			
P13	3439.3	341.8	278.533	290	278	0.0	1.2	25.09	3942-923-0001	3942-926-0001	1.5	4.5	2.0	0100	3942-925-0100	6	3942-922-0001	2	3942-922-0000	4	3942-922-0010 3942-923-0010	OPGW A B C	12	STOCKBRIDGE	8	STOCKBRIDGE			
P14	3717.9	343.4	276.830	278	285	0.0	0.9	24.31	3942-923-0001	3942-926-0001	1.2	4.5	1.6	0210	3942-925-0210	3	3942-922-0003	1	3942-922-0021	-	-	OPGW A B C	12	STOCKBRIDGE	8	STOCKBRIDGE			
P15	3994.7	343	285.793	281	283	0.0	0.9	24.31	3942-923-0001	3942-926-0001	1.2	4.5	1.6	0210	3942-925-0210	3	3942-922-0003	1	3942-922-0021	-	-	OPGW A B C	12	STOCKBRIDGE	8	STOCKBRIDGE			
P16	4280.5	342.4	271.854	279	288	0.0	0.9	24.31	3942-923-0001	3942-926-0001	1.2	4.5	1.6	0210	3942-925-0210	3	3942-922-0003	1	3942-922-0021	-	-	OPGW A B C	12	STOCKBRIDGE	8	STOCKBRIDGE			
P17	4552.4	339.9	270.886	271	264	0.0	0.9	24.31	3942-923-0001	3942-926-0001	1.2	4.5	1.6	0210	3942-925-0210	3	3942-922-0003	1	3942-922-0021	-	-	OPGW A B C	12	STOCKBRIDGE	8	STOCKBRIDGE	Bird Diverters installed on OPGW each 10m		
P18	4823.2	339.3	222.522	247	278	0.0	0.9	24.31	3942-923-0001	3942-926-0001	1.2	4.5	1.6	0210	3942-925-0210	3	3942-922-0003	1	3942-922-0021	-	-	OPGW A B C	12	STOCKBRIDGE	8	STOCKBRIDGE	Bird Diverters installed on OPGW each 10m		
P19	5045.8	338.8	219.873	221	160	-39.2	0.7	19.29	3942-923-0001	3942-926-0001	1.0	3.5	1.0	0300	3942-925-0300	3	3942-922-0005	1	3942-922-0022	2	3942-922-0010 3942-923-0010	OPGW A B C	12	STOCKBRIDGE	8	STOCKBRIDGE	Bird Diverters installed on OPGW each 10m		
P20	5265.6	338.3	274.466	247	279	0.0	0.9	24.31	3942-923-0001	3942-926-0001	1.2	4.5	1.6	0210	3942-925-0210	3	3942-922-0003	1	3942-922-0021	-	-	OPGW A B C	12	STOCKBRIDGE	8	STOCKBRIDGE	Bird Diverters installed on OPGW each 10m		
P21	5540.1	337.7	261.507	268	281	0.0	0.9	24.31	3942-923-0001	3942-926-0001	1.2	4.5	1.6	0210	3942-925-0210	3	3942-922-0003	1	3942-922-0021	-	-	OPGW A B C	12	STOCKBRIDGE	8	STOCKBRIDGE	Bird Diverters installed on OPGW each 10m		
P22	5801.6	334.2	233.76	248	270	0.0	0.9	24.31	3942-923-0001	3942-926-0001	1.2	4.5	1.6	0210	3942-925-0210	3	3942-922-0003	1	3942-922-0021	-	-	OPGW A B C	12	STOCKBRIDGE	8	STOCKBRIDGE	Bird Diverters installed on OPGW each 10m		
P23	6035.4	326.1	238.037	236	197	0.0	1.2	25.09	3942-923-0001	3942-926-0001	1.5	4.5	2.0	0100	3942-925-0100	6	3942-922-0001	2	3942-922-0000	4	3942-922-0010 3942-923-0010	OPGW A B C	12	STOCKBRIDGE	8	STOCKBRIDGE	Bird Diverters installed on OPGW each 10m		
P24	6273.4	326.8	276.289	257	268	0.0	1.2	25.09	3942-923-0001	3942-926-0001	1.5	4.5	2.0	0100	3942-925-0100	6	3942-922-0001	2	3942-922-0000	4	3942-922-0010 3942-923-0010	OPGW A B C	12	STOCKBRIDGE	8	STOCKBRIDGE	Bird Diverters installed on OPGW each 10m		
P25	6549.7	325.5	226.065	251	275	0.0	0.9	24.31	3942-923-0001	3942-926-0001	1.2	4.5	1.6	0210	3942-925-0210	3	3942-922-0003	1	3942-922-0021	-	-	OPGW A B C	12	STOCKBRIDGE	8	STOCKBRIDGE	Bird Diverters installed on OPGW each 10m		
P26	6775.8	325.5	197.927	212	159	31.8	0.7	19.29	3942-923-0001	3942-926-0001	1.0	3.5	1.0	0300	3942-925-0300	3	3942-922-0005	1	3942-922-0022	2	3942-922-0010 3942-923-0010	OPGW A B C	12	STOCKBRIDGE	8	STOCKBRIDGE	Bird Diverters installed on OPGW each 10m		

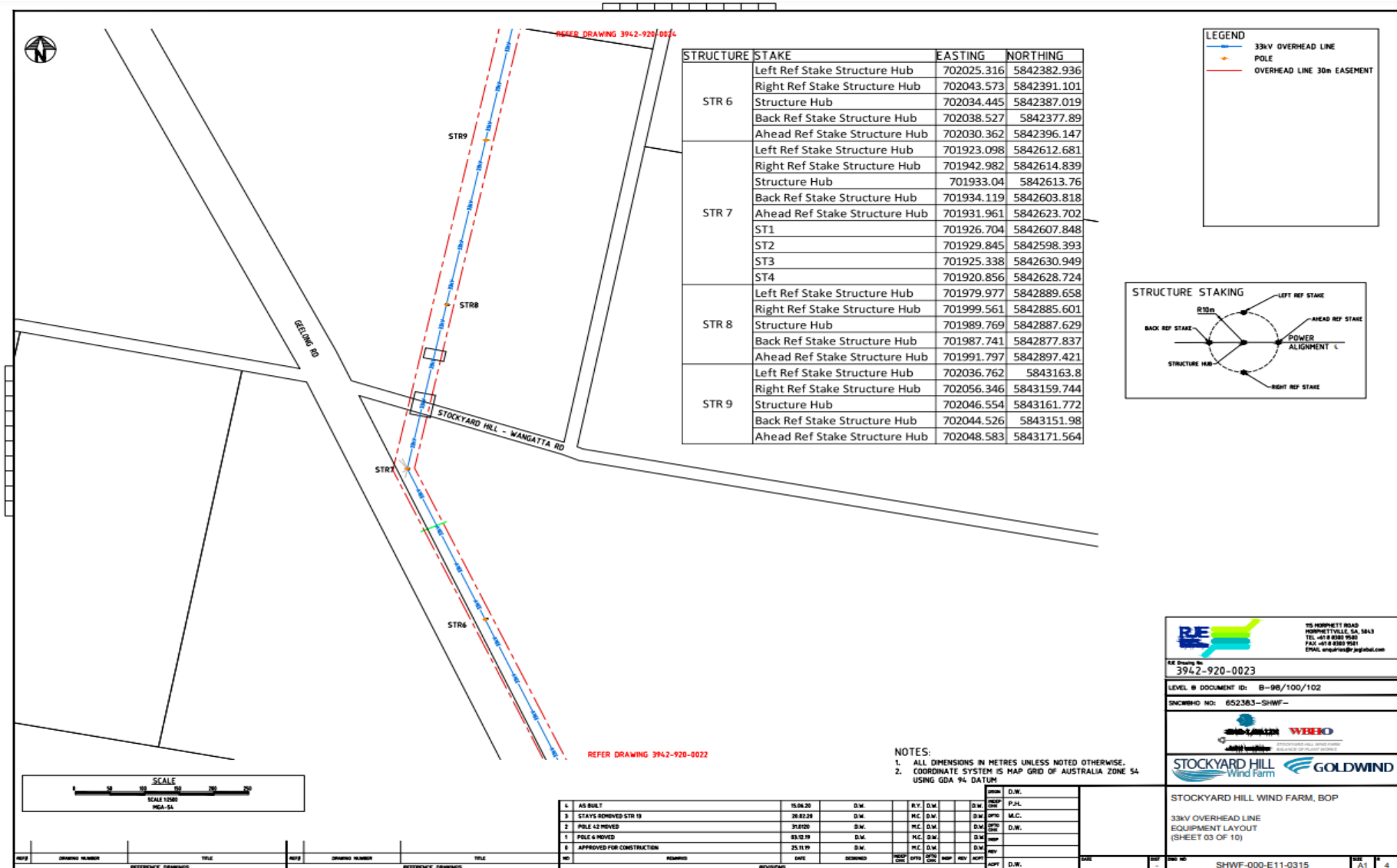


33 kV OVERHEAD LINE
 STOCKYARD HILL WINDFARM
 CONSTRUCTION SCHEDULE
 CLIENT # SHWF-000-E11-0300

RJE Doc No: 3942-902-0001
 Revision: 4 (AS-BUILT)
 DATE: 23/06/20

Structure Name	Run Dist (m)	Grd Elev (m)	Act For. Span (m)	Wind Span (m)	Wt Span @ T15	Deviation Angle (Degrees)	Butt @ (m)	Pole Height Above Ground (m)	Footing			Pole Top Arrangement		Conductor		OPGW		Staywire		Phasing		# Dampers per structure / conductor (Damper Type)			Remarks				
									Drawing	Earthing	Pile @	Setting Depth / Depth in footing (m)	Volume Concrete (m³)	Structure Type	GA Drawing	Qty	Arrangement	Qty	Arrangement	Qty	Arrangement	Viewed away from SUB	Qty	Cond		Qty	OPGW		
P27	6973.7	323.5	180.223	189	251	0.0	0.9	24.31	3942-923-0001	3942-926-0001	1.2	4.5	1.6	0210	3942-925-0210	3	3942-922-0003	1	3942-922-0021	-	-	opw A B C	12	STOCKBRIDGE	8	STOCKBRIDGE	Bird Diverters installed on OPGW each 10m		
P28	7153.9	323.5	192.001	186	147	-14.6	0.7	19.29	3942-923-0001	3942-926-0001	1.0	3.5	1.0	0300	3942-925-0300	3	3942-922-0005	1	3942-922-0022	2	3942-922-0010 3942-923-0010	opw A B C	12	STOCKBRIDGE	8	STOCKBRIDGE	Bird Diverters installed on OPGW each 10m		
P29	7345.9	323.4	170.188	181	168	0.0	0.75	18.89	3942-923-0001	3942-926-0001	1.0	4.0	1.1	0200	3942-925-0200	3	3942-922-0003	1	3942-922-0021	-	-	opw A B C	12	STOCKBRIDGE	8	STOCKBRIDGE	Bird Diverters installed on OPGW each 10m		
P30	7516.1	325.5	159.806	165	194	0.0	0.75	18.89	3942-923-0001	3942-926-0001	1.0	4.0	1.1	0200	3942-925-0200	3	3942-922-0003	1	3942-922-0021	-	-	opw A B C	12	STOCKBRIDGE	8	STOCKBRIDGE	Bird Diverters installed on OPGW each 10m		
P31	7675.9	323.8	200.759	180	127	26.7	0.7	19.29	3942-923-0001	3942-926-0001	1.0	3.5	1.0	0300	3942-925-0300	3	3942-922-0005	1	3942-922-0022	2	3942-922-0010 3942-923-0010	opw A B C	12	STOCKBRIDGE	8	STOCKBRIDGE	Bird Diverters installed on OPGW each 10m		
P32	7876.7	324.5	275.365	238	268	0.0	0.9	24.31	3942-923-0001	3942-926-0001	1.2	4.5	1.6	0210	3942-925-0210	3	3942-922-0003	1	3942-922-0021	-	-	opw A B C	12	STOCKBRIDGE	8	STOCKBRIDGE	Bird Diverters installed on OPGW each 10m		
P33	8152.0	326.6	262.486	269	264	0.0	0.9	24.31	3942-923-0001	3942-926-0001	1.2	4.5	1.6	0210	3942-925-0210	3	3942-922-0003	1	3942-922-0021	-	-	opw A B C	12	STOCKBRIDGE	8	STOCKBRIDGE	Bird Diverters installed on OPGW each 10m		
P34	8414.5	329.3	281.098	272	380	0.0	1.2	25.09	3942-923-0001	3942-926-0001	1.5	4.5	2.0	0100	3942-925-0100	6	3942-922-0001	2	3942-922-0020	4	3942-922-0010 3942-923-0010	opw A B C	12	STOCKBRIDGE	8	STOCKBRIDGE			
P35	8695.6	331.5	318.212	300	304	0.0	0.9	24.31	3942-923-0001	3942-926-0001	1.2	4.5	1.6	0210	3942-925-0210	3	3942-922-0003	1	3942-922-0021	-	-	opw A B C	12	STOCKBRIDGE	8	STOCKBRIDGE			
P36	9013.8	332.5	300.366	309	296	0.2	0.9	24.31	3942-923-0001	3942-926-0001	1.2	4.5	1.6	0210	3942-925-0210	3	3942-922-0003	1	3942-922-0021	-	-	opw A B C	12	STOCKBRIDGE	8	STOCKBRIDGE			
P37	9314.2	337.2	304.522	303	287	0.0	0.9	24.31	3942-923-0001	3942-926-0001	1.2	4.5	1.6	0210	3942-925-0210	3	3942-922-0003	1	3942-922-0021	-	-	opw A B C	12	STOCKBRIDGE	8	STOCKBRIDGE			
P38	9618.7	346.4	213.797	259	254	0.0	0.9	24.31	3942-923-0001	3942-926-0001	1.2	4.5	1.6	0210	3942-925-0210	3	3942-922-0003	1	3942-922-0021	-	-	opw A B C	12	STOCKBRIDGE	8	STOCKBRIDGE			
P39	9832.5	354	305.31	260	347	0.0	0.9	24.31	3942-923-0001	3942-926-0001	1.2	4.5	1.6	0210	3942-925-0210	3	3942-922-0003	1	3942-922-0021	-	-	opw A B C	12	STOCKBRIDGE	8	STOCKBRIDGE			
P40	10137.8	341.8	216.665	261	164	0.0	0.9	24.31	3942-923-0001	3942-926-0001	1.2	4.5	1.6	0210	3942-925-0210	3	3942-922-0003	1	3942-922-0021	-	-	opw A B C	12	STOCKBRIDGE	8	STOCKBRIDGE			
P41	10354.5	351.7	227.73	222	251	0.0	0.9	24.31	3942-923-0001	3942-926-0001	1.2	4.5	1.6	0210	3942-925-0210	3	3942-922-0003	1	3942-922-0021	-	-	opw A B C	12	STOCKBRIDGE	8	STOCKBRIDGE			
P42	10582.2	355.9	53.118	140	167	0.0	1.2	25.09	3942-923-0001	3942-926-0001	1.5	4.5	2.0	0100	3942-925-0100	6	3942-922-0001	2	3942-922-0020	4	3942-922-0010 3942-923-0010	opw A B C	12	STOCKBRIDGE	8	STOCKBRIDGE			
P43	10635.3	355	19.151	38	131	87.6	1.2	25.09	3942-923-0001	3942-926-0001	1.5	4.5	2.0	0100	3942-925-0100	3	3942-922-0001	1	3942-922-0020	2	-	opw A B C	6	STOCKBRIDGE	2	STOCKBRIDGE			
GANTRY	10654.5	353.5	0	12	-83	0.0		12.40						CUSTOMER	CUSTOMER		CUSTOMER		CUSTOMER										

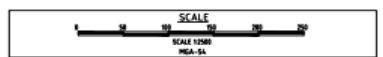
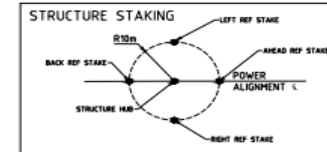




STRUCTURE	STAKE	EASTING	NORTHING
STR 6	Left Ref Stake Structure Hub	702025.316	5842382.936
	Right Ref Stake Structure Hub	702043.573	5842391.101
	Structure Hub	702034.445	5842387.019
	Back Ref Stake Structure Hub	702038.527	5842377.89
	Ahead Ref Stake Structure Hub	702030.362	5842396.147
STR 7	Left Ref Stake Structure Hub	701923.098	5842612.681
	Right Ref Stake Structure Hub	701942.982	5842614.839
	Structure Hub	701933.04	5842613.76
	Back Ref Stake Structure Hub	701934.119	5842603.818
	Ahead Ref Stake Structure Hub	701931.961	5842623.702
STR 8	ST1	701926.704	5842607.848
	ST2	701929.845	5842598.393
	ST3	701925.338	5842630.949
	ST4	701920.856	5842628.724
	Left Ref Stake Structure Hub	701979.977	5842889.658
STR 9	Right Ref Stake Structure Hub	701999.561	5842885.601
	Structure Hub	701989.769	5842887.629
	Back Ref Stake Structure Hub	701987.741	5842877.837
	Ahead Ref Stake Structure Hub	701991.797	5842897.421
	Left Ref Stake Structure Hub	702036.762	5843163.8
STR 9	Right Ref Stake Structure Hub	702056.346	5843159.744
	Structure Hub	702046.554	5843161.772
	Back Ref Stake Structure Hub	702044.526	5843151.98
STR 9	Ahead Ref Stake Structure Hub	702048.583	5843171.564

LEGEND

- 33kV OVERHEAD LINE
- POLE
- OVERHEAD LINE 30m EASEMENT



NOTES:
 1. ALL DIMENSIONS IN METRES UNLESS NOTED OTHERWISE.
 2. COORDINATE SYSTEM IS MAP GRID OF AUSTRALIA ZONE 54 USING GDA 94 DATUM

NO	REVISION	DATE	REASON	BY	CHECKED	DATE	REVISION	DATE	REASON	BY	CHECKED	DATE	REVISION
4	AS BUILT	15.06.20											
3	STAYS REMOVED STR 13	20.02.20											
2	POLE 42 MOVED	31.02.20											
1	POLE 4 MOVED	03.02.19											
0	APPROVED FOR CONSTRUCTION	25.11.19											

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RE Drawing No: **3942-920-0023**

LEVEL B DOCUMENT ID: B-98/100/102

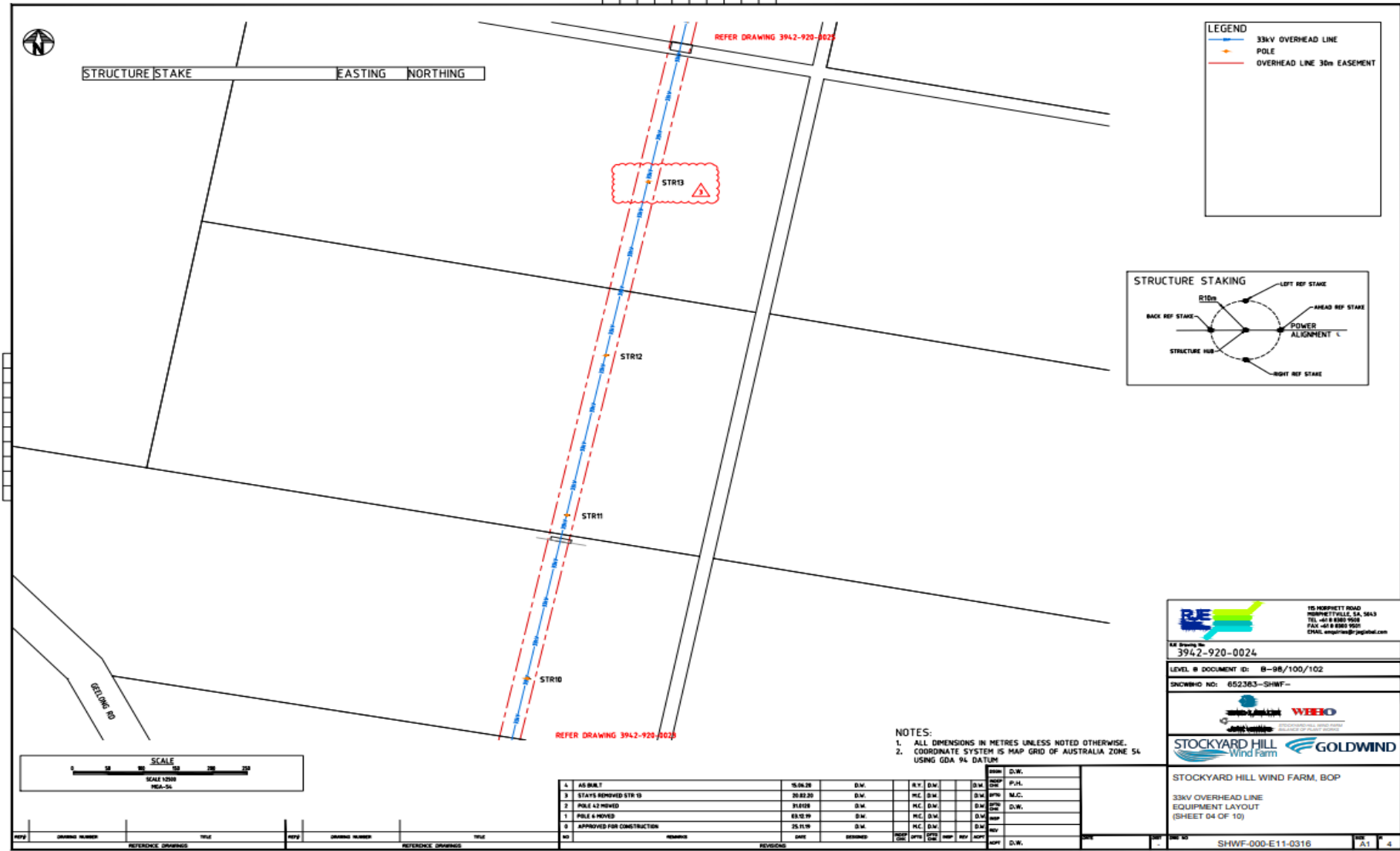
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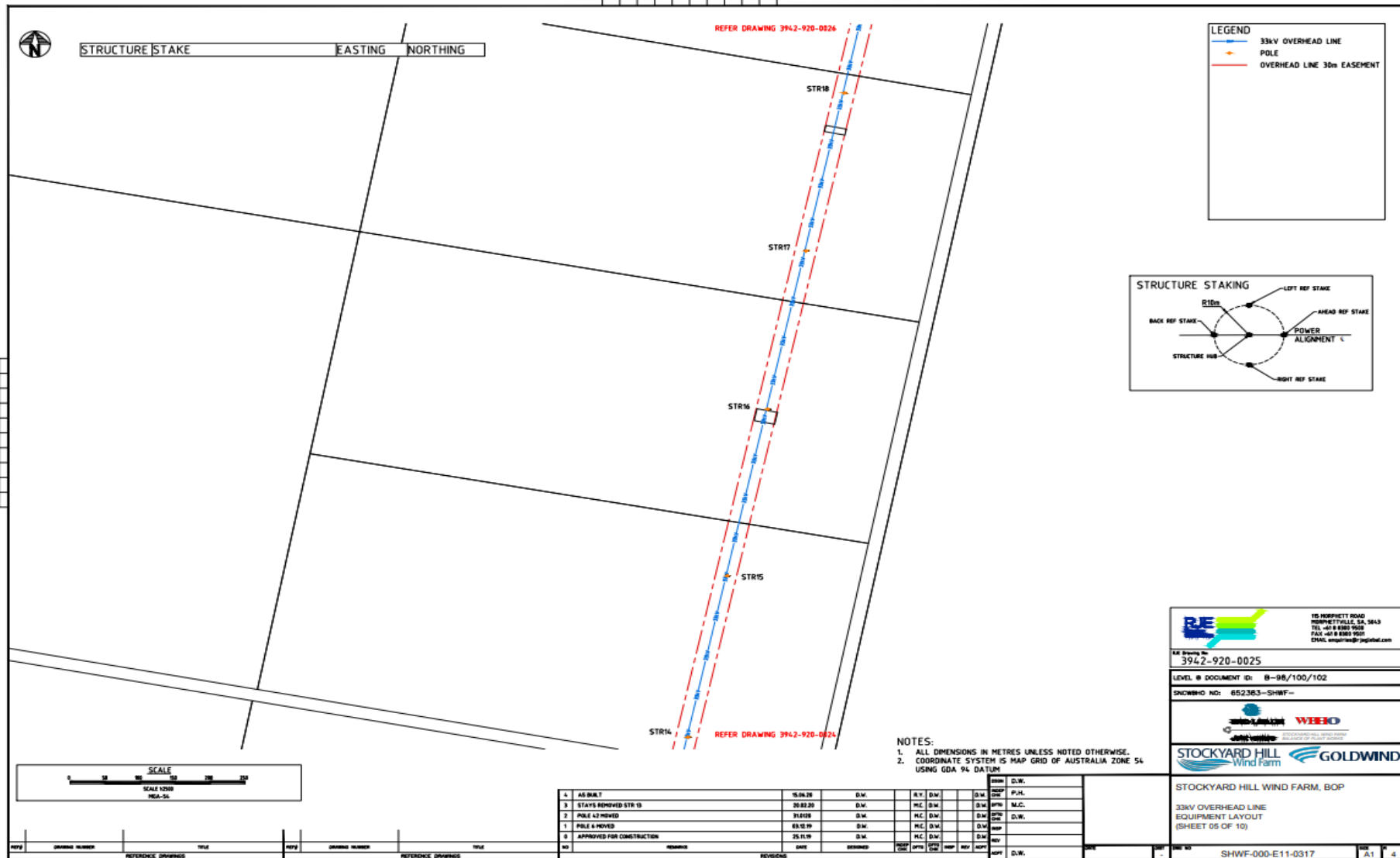
STOCKYARD HILL WIND FARM **GOLDWIND**

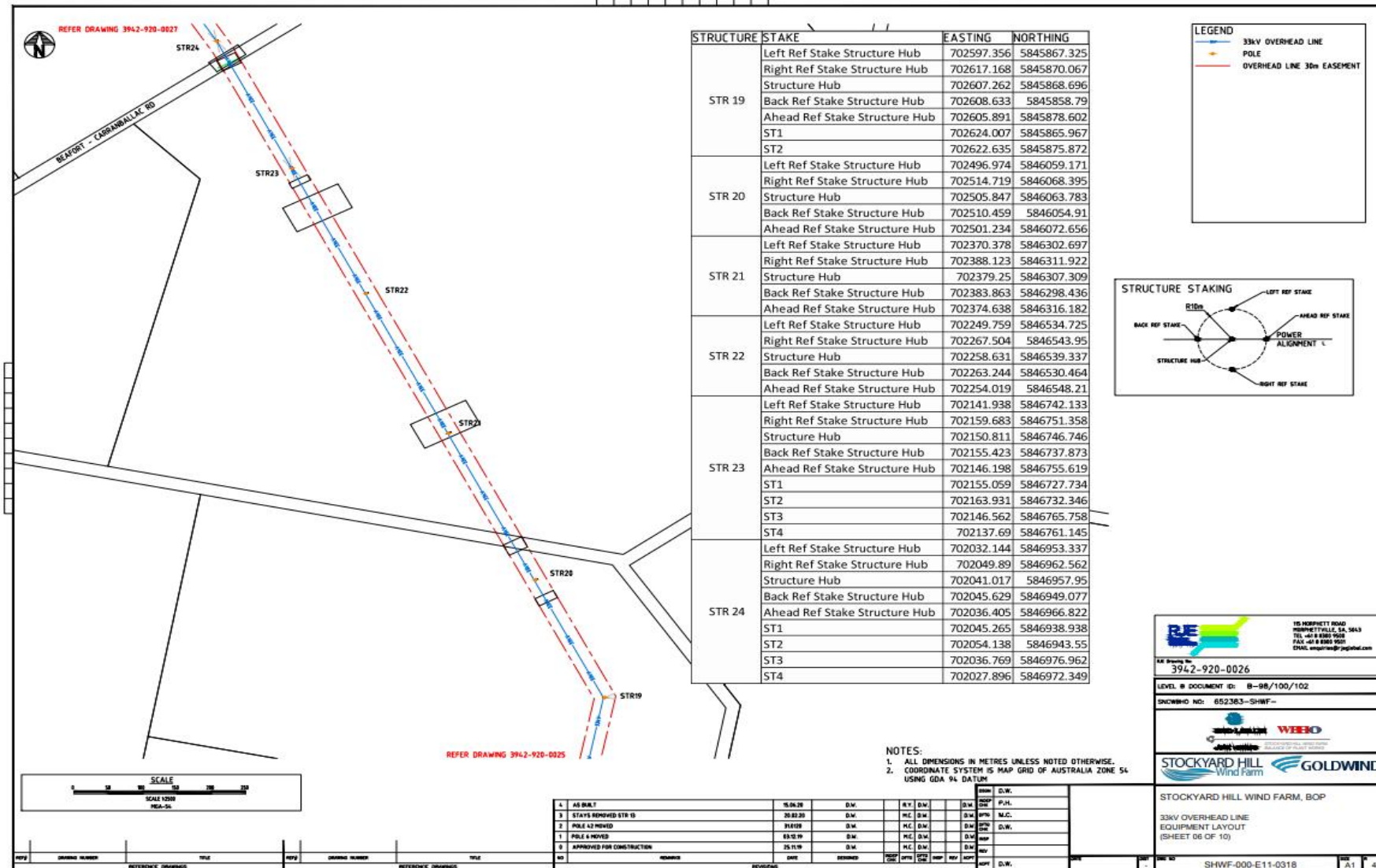
STOCKYARD HILL WIND FARM, BOP

33kV OVERHEAD LINE
 EQUIPMENT LAYOUT
 (SHEET 03 OF 10)

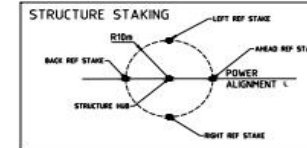
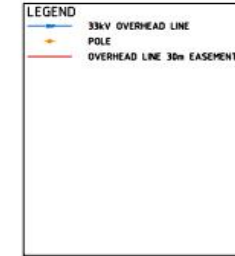
SHWF-000-E11-0315







STRUCTURE	STAKE	EASTING	NORTHING
STR 19	Left Ref Stake Structure Hub	702597.356	5845867.325
	Right Ref Stake Structure Hub	702617.168	5845870.067
	Structure Hub	702607.262	5845868.696
	Back Ref Stake Structure Hub	702608.633	5845858.79
	Ahead Ref Stake Structure Hub	702605.891	5845878.602
STR 20	ST1	702624.007	5845865.967
	ST2	702622.635	5845875.872
	Left Ref Stake Structure Hub	702496.974	5846059.171
	Right Ref Stake Structure Hub	702514.719	5846068.395
	Structure Hub	702505.847	5846063.783
STR 21	Back Ref Stake Structure Hub	702510.459	5846054.91
	Ahead Ref Stake Structure Hub	702501.234	5846072.656
	Left Ref Stake Structure Hub	702370.378	5846302.697
	Right Ref Stake Structure Hub	702388.123	5846311.922
	Structure Hub	702379.25	5846307.309
STR 22	Back Ref Stake Structure Hub	702383.863	5846298.436
	Ahead Ref Stake Structure Hub	702374.638	5846316.182
	Left Ref Stake Structure Hub	702249.759	5846534.725
	Right Ref Stake Structure Hub	702267.504	5846543.95
	Structure Hub	702258.631	5846539.337
STR 23	Back Ref Stake Structure Hub	702263.244	5846530.464
	Ahead Ref Stake Structure Hub	702254.019	5846548.21
	Left Ref Stake Structure Hub	702141.938	5846742.133
	Right Ref Stake Structure Hub	702159.683	5846751.358
	Structure Hub	702150.811	5846746.746
STR 24	Back Ref Stake Structure Hub	702155.423	5846737.873
	Ahead Ref Stake Structure Hub	702146.198	5846755.619
	ST1	702155.059	5846727.734
	ST2	702163.931	5846732.346
	ST3	702146.562	5846765.758
	ST4	702137.69	5846761.145
STR 24	Left Ref Stake Structure Hub	702032.144	5846953.337
	Right Ref Stake Structure Hub	702049.89	5846962.562
	Structure Hub	702041.017	5846957.95
	Back Ref Stake Structure Hub	702045.629	5846949.077
	Ahead Ref Stake Structure Hub	702036.405	5846966.822
	ST1	702045.265	5846938.938
	ST2	702054.138	5846943.55
	ST3	702036.769	5846976.962
	ST4	702027.896	5846972.349



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RE Drawing No.
3942-920-0026

LEVEL # DOCUMENT ID: B-98/100/102

SHOWN#0 NO: 652383-SHWF-



STOCKYARD HILL WIND FARM, BOP

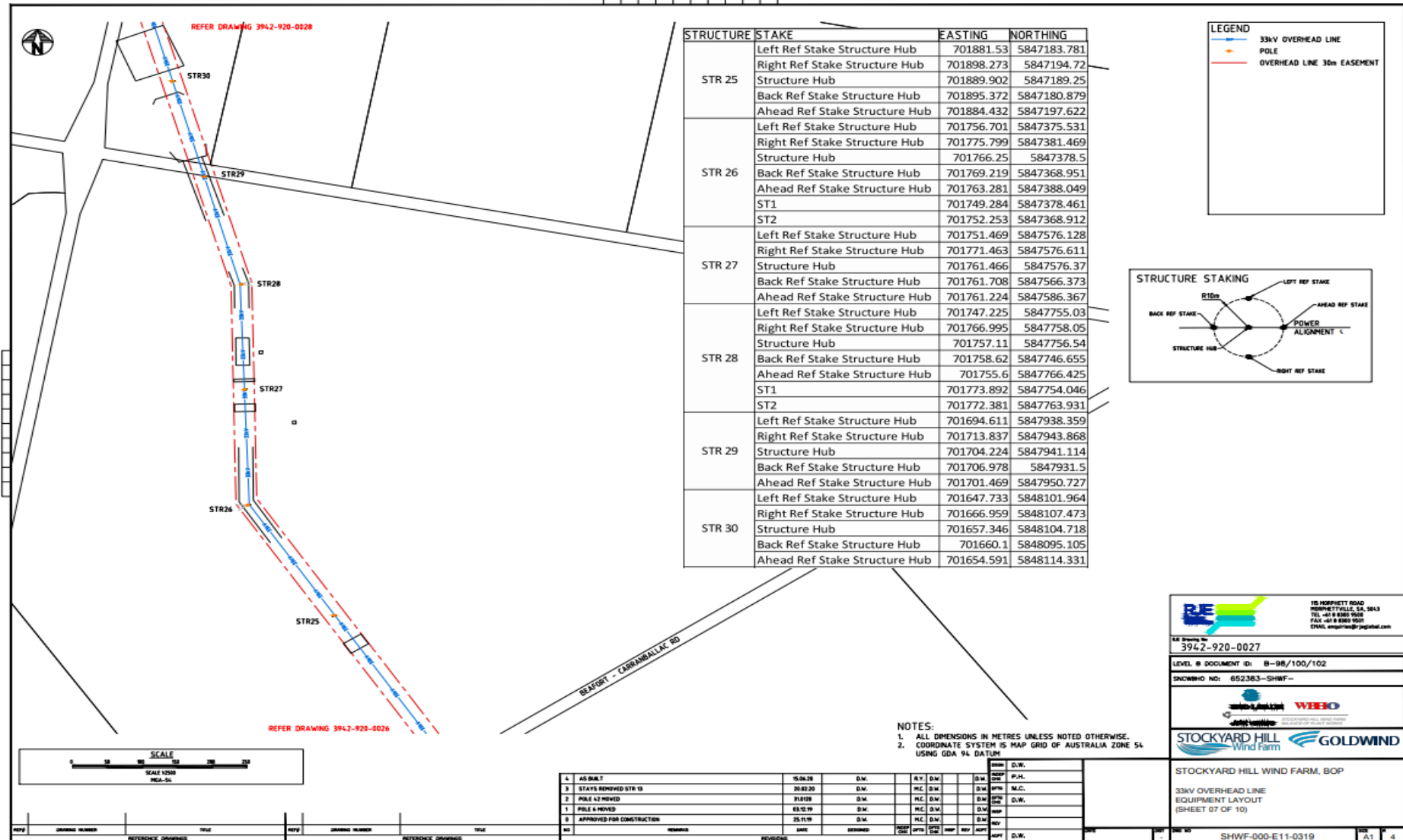
33kV OVERHEAD LINE
EQUIPMENT LAYOUT
(SHEET 06 OF 10)

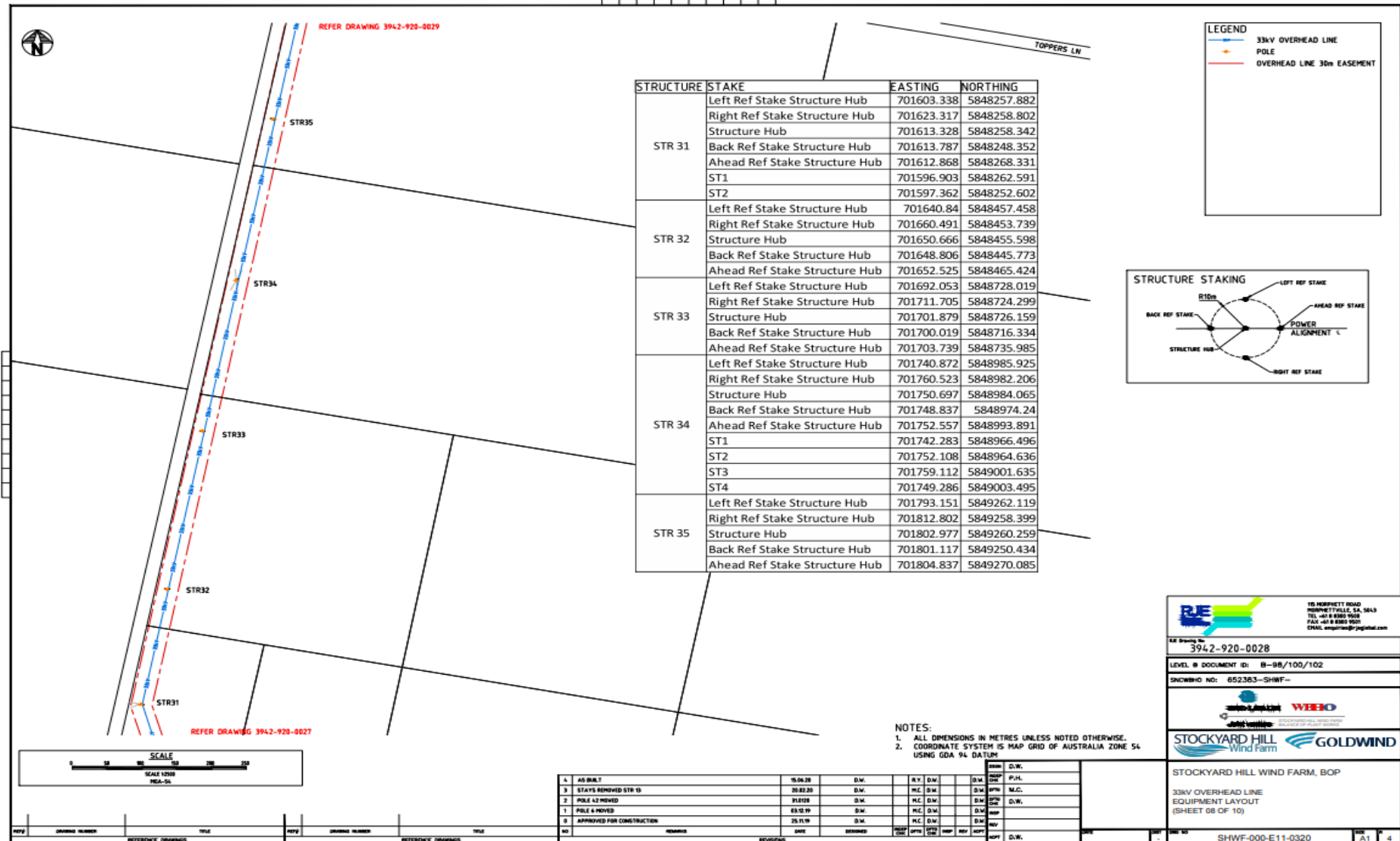
SHWF-000-E11-0318

- NOTES:
1. ALL DIMENSIONS IN METRES UNLESS NOTED OTHERWISE.
2. COORDINATE SYSTEM IS MAP GRID OF AUSTRALIA ZONE 54 USING GDA 94 DATUM

NO	REVISION	DATE	BY	CHKD	APPD	REV	APPD
4	AS BUILT	15/01/23	D.W.				
3	STAYS REMOVED STR 19	20/02/20	D.W.				
2	POLE 42 MOVED	18/03/19	D.W.				
1	POLE 48 MOVED	08/03/19	D.W.				
0	APPROVED FOR CONSTRUCTION	25/11/19	D.W.				

NO	DRAWING NUMBER	TITLE	NO	DRAWING NUMBER	TITLE
01	SHWF-000-E11-0318	33kV OVERHEAD LINE EQUIPMENT LAYOUT (SHEET 06 OF 10)	01	SHWF-000-E11-0318	33kV OVERHEAD LINE EQUIPMENT LAYOUT (SHEET 06 OF 10)

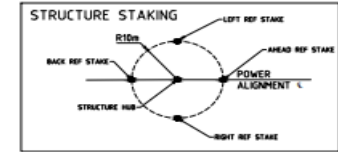




LEGEND

- 33kV OVERHEAD LINE
- POLE
- OVERHEAD LINE 30m EASEMENT

STRUCTURE	STAKE	EASTING	NORTHING
STR 31	Left Ref Stake Structure Hub	701603.338	5848257.882
	Right Ref Stake Structure Hub	701623.317	5848258.802
	Structure Hub	701613.328	5848258.342
	Back Ref Stake Structure Hub	701613.787	5848248.352
	Ahead Ref Stake Structure Hub	701612.868	5848268.331
	ST1	701596.903	5848262.591
STR 32	ST2	701597.362	5848252.602
	Left Ref Stake Structure Hub	701640.84	5848457.458
	Right Ref Stake Structure Hub	701660.491	5848453.739
	Structure Hub	701650.666	5848455.598
	Back Ref Stake Structure Hub	701648.806	5848445.773
	Ahead Ref Stake Structure Hub	701652.525	5848465.424
STR 33	Left Ref Stake Structure Hub	701692.053	5848728.019
	Right Ref Stake Structure Hub	701711.705	5848724.299
	Structure Hub	701701.879	5848726.159
	Back Ref Stake Structure Hub	701700.019	5848716.334
	Ahead Ref Stake Structure Hub	701703.739	5848735.985
	Left Ref Stake Structure Hub	701740.872	5848985.925
STR 34	Right Ref Stake Structure Hub	701760.523	5848982.206
	Structure Hub	701750.697	5848984.065
	Back Ref Stake Structure Hub	701748.837	5848974.24
	Ahead Ref Stake Structure Hub	701752.557	5848993.891
	ST1	701742.283	5848966.496
	ST2	701752.108	5848964.636
	ST3	701759.112	5849001.635
	ST4	701749.286	5849003.495
STR 35	Left Ref Stake Structure Hub	701793.151	5849262.119
	Right Ref Stake Structure Hub	701812.802	5849258.399
	Structure Hub	701802.977	5849260.259
	Back Ref Stake Structure Hub	701801.117	5849250.434
	Ahead Ref Stake Structure Hub	701804.837	5849270.085



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3942-920-0028

LEVEL: B DOCUMENT ID: B-98/100/102

SNOWBOND NO: 652363-SHWF-

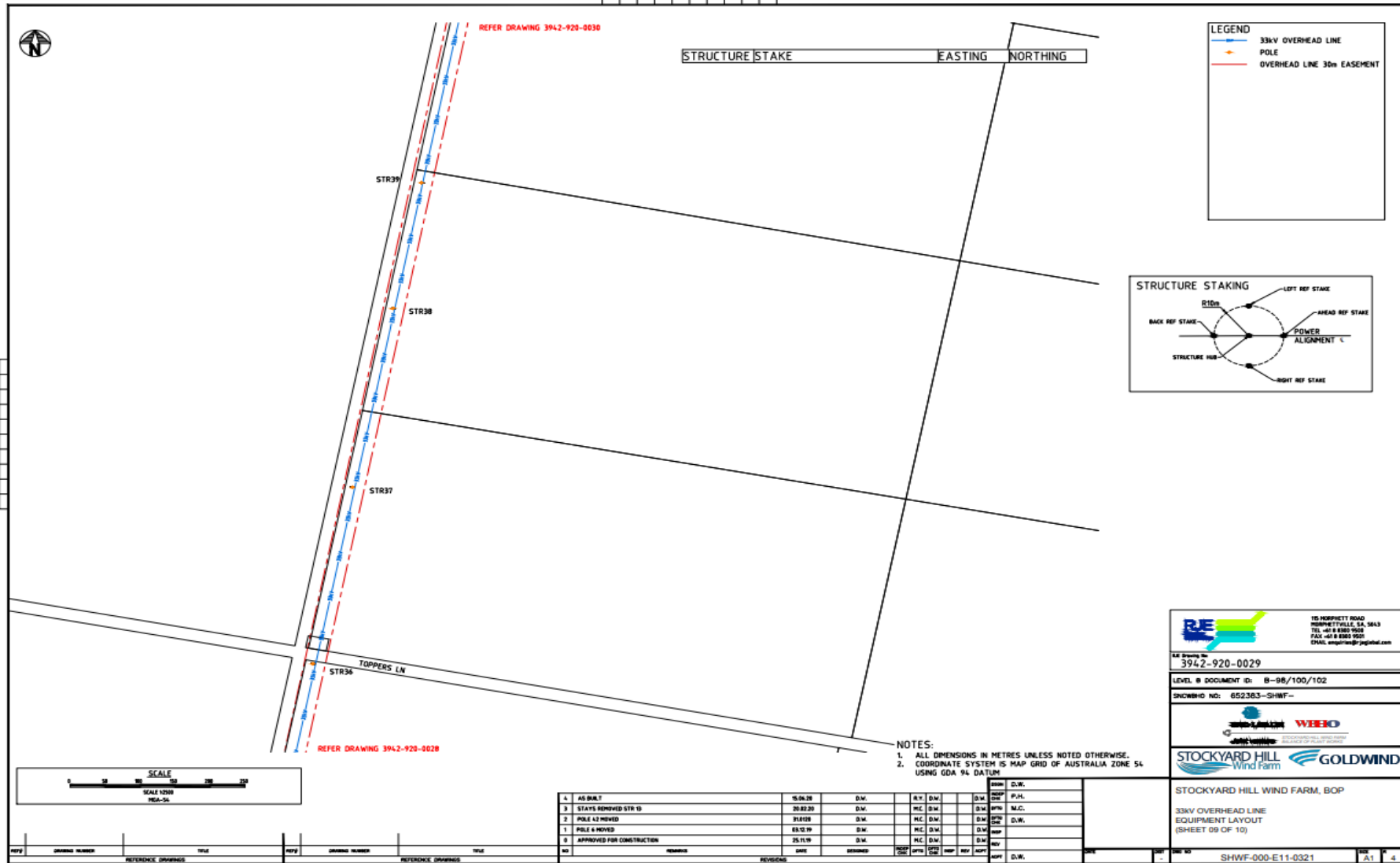
STOCKYARD HILL WIND FARM, BOP

33kV OVERHEAD LINE EQUIPMENT LAYOUT (SHEET 08 OF 10)

- NOTES:**
- ALL DIMENSIONS IN METRES UNLESS NOTED OTHERWISE.
 - COORDINATE SYSTEM IS MAP GRID OF AUSTRALIA ZONE 54 USING GDA 94 DATUM.

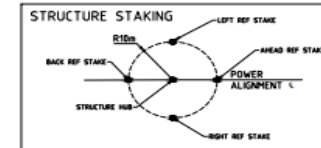
NO	REVISION	DATE	ISSUED	BY	CHKD	APPD	REV	APPD
1	AS BUILT	15.09.28	D.W.					
2	STAKES REMOVED STR 19	20.02.20	D.W.	H.C.	D.W.	D.W.		
3	POLE 13 MOVED	21.07.08	D.W.	H.C.	D.W.	D.W.		
4	POLE 6 MOVED	03.05.09	D.W.	H.C.	D.W.	D.W.		
5	APPROVED FOR CONSTRUCTION	25.11.19	D.W.	H.C.	D.W.	D.W.		

NO	DRAWING NUMBER	TITLE	NO	DRAWING NUMBER	TITLE
	REFERENCE DRAWINGS			REFERENCE DRAWINGS	



LEGEND

- 33kV OVERHEAD LINE
- POLE
- OVERHEAD LINE 30m EASEMENT



NOTES:
 1. ALL DIMENSIONS IN METRES UNLESS NOTED OTHERWISE.
 2. COORDINATE SYSTEM IS MAP GRID OF AUSTRALIA ZONE 54 USING GDA 94 DATUM

NO	REVISIONS	DATE	DESIGNED	CHECKED	DATE	APP'D	REV	APP'D
1	AS BUILT	15.06.26	D.W.					
2	STAYS REMOVED STR 10	20.02.20	D.W.					
3	POLE 02 MOVED	21.01.20	D.W.					
4	POLE 04 MOVED	02.10.19	D.W.					
5	APPROVED FOR CONSTRUCTION	25.11.19	D.W.					

10 HOPKINETT ROAD
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3942-920-0029

LEVEL 9 DOCUMENT ID: B-98/100/102

SHOWNING NO: 652363-SHWF-

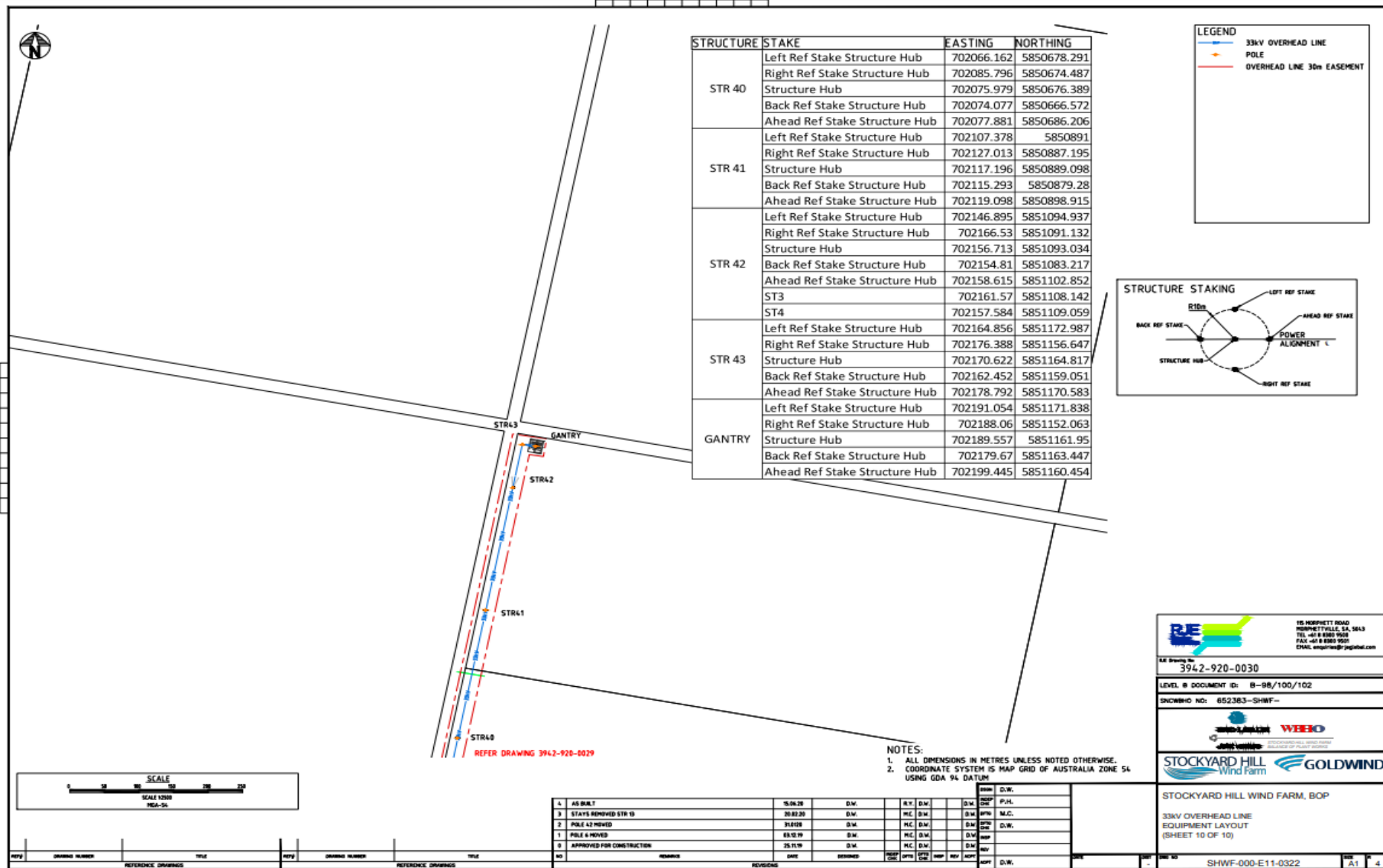
STOCKYARD HILL Wind Farm

GOLDWIND

STOCKYARD HILL WIND FARM, BOP

33kV OVERHEAD LINE
 EQUIPMENT LAYOUT
 (SHEET 09 OF 10)

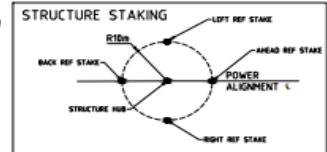
SHWF-000-E11-0321



STRUCTURE	STAKE	EASTING	NORTHING
STR 40	Left Ref Stake Structure Hub	702066.162	5850678.291
	Right Ref Stake Structure Hub	702085.796	5850674.487
	Structure Hub	702075.979	5850676.389
	Back Ref Stake Structure Hub	702074.077	5850666.572
	Ahead Ref Stake Structure Hub	702077.881	5850686.206
STR 41	Left Ref Stake Structure Hub	702107.378	5850891
	Right Ref Stake Structure Hub	702127.013	5850887.195
	Structure Hub	702117.196	5850889.098
	Back Ref Stake Structure Hub	702115.293	5850879.28
	Ahead Ref Stake Structure Hub	702119.098	5850898.915
STR 42	Left Ref Stake Structure Hub	702146.895	5851094.937
	Right Ref Stake Structure Hub	702166.53	5851091.132
	Structure Hub	702156.713	5851093.034
	Back Ref Stake Structure Hub	702154.81	5851083.217
	Ahead Ref Stake Structure Hub	702158.615	5851102.852
STR 43	ST3	702161.57	5851108.142
	ST4	702157.584	5851109.059
	Left Ref Stake Structure Hub	702164.856	5851172.987
	Right Ref Stake Structure Hub	702176.388	5851156.647
	Structure Hub	702170.622	5851164.817
GANTRY	Back Ref Stake Structure Hub	702162.452	5851159.051
	Ahead Ref Stake Structure Hub	702178.792	5851170.583
	Left Ref Stake Structure Hub	702191.054	5851171.838
	Right Ref Stake Structure Hub	702188.06	5851152.063
	Structure Hub	702189.557	5851161.95
GANTRY	Back Ref Stake Structure Hub	702179.67	5851163.447
	Ahead Ref Stake Structure Hub	702199.445	5851160.454

LEGEND

- 33kV OVERHEAD LINE
- POLE
- OVERHEAD LINE 30m EASEMENT



NOTES:
 1. ALL DIMENSIONS IN METRES UNLESS NOTED OTHERWISE.
 2. COORDINATE SYSTEM IS MAP GRID OF AUSTRALIA ZONE 54 USING GDA 94 DATUM

NO	REVISION	DATE	REVISION	DATE	BY	CHK	APP	REV	DATE	BY	CHK	APP
1	AS-BUILT	15/06/20	D.W.									
2	STATS REMOVED STR 13	20/02/20	D.W.									
3	POLE A2 MOVED	31/03/20	D.W.									
4	POLE A2 MOVED	03/02/19	D.W.									
5	APPROVED FOR CONSTRUCTION	25/11/19	D.W.									

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REF Drawing No: 3942-920-0030

LEVEL # DOCUMENT ID: B-98/100/102

SHWCWHD NO: 852363-SHWF--

WEEKO
 STOCKYARD HILL WIND FARM
 STOCKYARD HILL WIND FARM

GOLDWIND
 STOCKYARD HILL WIND FARM, BOP
 33kV OVERHEAD LINE
 EQUIPMENT LAYOUT
 (SHEET 10 OF 10)

DATE NO: SHWF-000-E11-0322

REV: A1 P: 4

7 Reg 6 (h) Prevention Strategies

The [Emergency Management Policy](#) articulates the organisation’s commitment to emergency management, including fire. It outlines emergency management objectives to:

- Prevent or reduce the risks of incidents occurring
- Maintain welfare and confidence of our people, customers, stakeholders and the community
- Minimise the impacts of a disruption
- Ensure that critical stakeholders are kept informed
- Return to normal operations as quickly as possible.

SHWFPL ensures assets are operated and maintained to:

- deliver safe, effective and reliable services
- protect and improve the environment
- minimise the risk of fire ignition by high voltage power lines.

SHWFPL achieves this through the following preventative strategies and programs:

- Planned annual inspections of infrastructure including overhead lines and 33kv structure inspections.
- Competent technicians undertaking inspections using thermal imaging cameras
- Completion and reporting of any identified issues or damages using internal hazard reporting system, Viking, and logging preventative program inspections
- Documenting inspections and results utilising Goldwind Australia documents;
 - **GWA-HSE-CHE-0023** Overhead Line Patrol and Visual Condition Inspection
 - **GWA-OM-CHE-0009** 33KV Structure Inspection

The management of maintenance of the electric lines follows a regime of scheduled and unscheduled activities. Scheduled activities include all activities that are planned for execution throughout the year and are scheduled in the Annual Compliance Tracker. Unscheduled activities are defects that require planning and actioning in certain timeframes based on the severity of risk.

The timeframes to manage defects are determined according to the nature of the defect and planned accordingly as unscheduled tasks. The defects are generally categorized as below to guide the planning and execution of these tasks:

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- Minor - activity does not pause any immediate risk of harm – scheduled in the annual plan and monitored during routine inspections
- Major – Does not require stopping the operation but needs to be attended as soon as possible- Planned for execution within the month or earlier based on availability
- Catastrophic – This event can lead to serious harm- stop operations and act immediately

Below are the last inspection reports for the Overhead Line Inspection and Vegetation Clearance report. The findings from the inspection are listed in these reports. The rectification works are scheduled to be commenced by 30th Oct 2023 and completed by 3rd Nov 2023.

- Goldwind-SHWF Overhead Line Maintenance Report (Insp Dt: Oct 22)
- Electrical Line Clearance Inspection Report 0479230124 – (Insp Dt 24012023)

Activation of the Emergency Response Plan

Managers/supervisors are required to make sure conditions at each relevant worksite are monitored on Extreme and Catastrophic Fire Danger Rating days. This can be monitored by:

- Monitoring the CFA website - <https://www.cfa.vic.gov.au/plan-prepare/your-bushfire-plan>
- <https://www.cfa.vic.gov.au/home/local-information> (Set local area to Beaufort)
- Vic Emergency Site - <https://www.emergency.vic.gov.au/>
- Australian Fire Danger Rating System – afdrs.com.au - As of September 22, 2022, the Australian fire danger rating system was standardized across all states.
- Severe Weather Preparation Plan – **GWA-HSE-FRM-0061** shall be completed by site manager/HSEQ Advisor on days of high fire danger. This will aid in deciding whether or not to active the Emergency Response Plan.
- Additional information may be available from listening to the local ABC radio station.

Line Managers/supervisors must tailor their plans relevant to their operations and ensure they are practiced and activated when the Fire Danger Rating is forecast as ‘Extreme’ or ‘Catastrophic’ for the fire district. (See CFA Local Information Site for Risk Rating Level)

When the Emergency Response Plan is activated, managers/supervisors shall prepare the site for a fire and the outcomes of decisions are communicated to workers. This can be done through the Severe Weather Preparation Plan.

On days declared as Extreme or Catastrophic Fire Danger rating outside of the fire danger season, managers/supervisors must activate the emergency response plan.

In accordance with the Fire Management Planning process, SHWFPL has developed bushfire risk management plan identifying assets at risk from bushfire and programs to mitigate that risk. SHWFPL has developed and maintains the Electric Line Clearance Management Plan which outline our responsibilities for clearing vegetation to manage the fire risk from powerline on our area of operation and ensure our compliance with relevant legislation, local plans and procedures at the Wind Farm include the Emergency Response Plan.

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8 Plan Availability Reg 6 (i) A plan for inspection;

This plan is available for public inspection, in accordance with section 83BA (a) and (b), following approval of the plan by Energy Safe Victoria. The Plan will be available on the Project's website <https://www.stockyardhillwindfarm.com.au/compliance> and for viewing during normal business hours (8am to 5pm) or on request at SHWFPL Head Office located on Level 4/845 La Trobe Street, Melbourne, Vic 3000.

The Electric Line Management Clearance Plan – Asset Protection Zone (APZ) details the annual vegetation inspection and clearance works required for the overhead line. This plan will be available on the Projects website <https://www.stockyardhillwindfarm.com.au/compliance>

Scope of bushfire prevention work

1 Site Inspections

Inspections shall be performed in liaison with the local CFA Team Leader/Group Captain and undertaken by staff experienced in civil works, vegetation management and bushfire control.

2 Fuel

The surface fine fuel and elevated fuel in the APZ's is to be monitored as frequently as necessary dependent on vegetation regeneration and other conditions.

Monitoring and assessment are to be undertaken no later than September each year and is to continue on as required basis for the duration of the bushfire danger period as defined by the relevant regional CFA Bushfire Management plans.

Asset Protection Zone (APZ) is part of the Emergency Management and incorporates the approved scope of vegetation control for bushfire hazard management. APZ dimensions have been determined using the VIC CFA documents: Building in Bush Fire Prone Areas Single Dwelling; and Planning for Bush Fire Protection (2006).

Features of the location or site that affect the level of risk include:

- access and egress both to the location or site within it
- proximity to established urban or township areas
- vegetation on site that planning schemes seek to protect.

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9 Reg 6 (j) details of the processes and procedures for competency and training to carry out inspections;

SHWFPL engages suitably qualified contractor(s) to undertake maintenance inspections of our HV overhead power lines in the area. The qualifications of internal and external contractors are reviewed and verified before engagement to ensure they meet the minimum level established by the Victorian Electricity Supply Industry (VESI) and, therefore, meet the Australian Qualification Framework (AQF) requirements or equivalent. This ensures that people undertaking the inspections have the relevant qualifications and licenses.

It is a contractual requirement that all employees and contractors engaged to carry out cyclic inspection of overhead power line assets including poles must have minimum of Certificate II in Asset Inspection – UET20612. Where this qualification has been attained in a State of Australia other than Victoria, induction shall be conducted by a person holding a Certificate IV in Training and Assessment at a minimum, and include information on Victorians Acts, Regulations, Codes of Practice, Safety Rules, Industry Guidelines and Asset Identification.

SHWFPL and its contractors maintain the records of relevant authorisation and review to ensure re-authorisation shall occur at intervals not exceeding a three-year period.

Asset Inspection plan

Routine inspections will be undertaken by suitably qualified and competent employees and/or contractors, as identified above.

Inspection timeframes will align with seasonal change moving into the higher fire danger period of summer. All inspections will be completed annually by the last business day of November. Any findings observed will either be rectified at the same time or will be addressed as per the risk rating

All documents will be stored internally on SHWFPL systems and monitored for completion, accuracy and identified issues by site management and HSEQ.

Should any other person(s) not included in section j (above) be engaged to carry out any functions under this plan, the organisation must be pre-qualified under Cm3 and all person's carrying out the functions must provide all documentation, certifications, licenses and relevant proof of training in line with the scope of the works to be undertaken. Further to this a SWMS

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(Safe Work Method Statement) must be submitted to SHWF for approval which will only be granted once any requested amendments have been made.

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10 Reg 6 (k) details of the processes and procedures (other than persons referred to in paragraph (j) to ensure competency in roles;

SHWFPL engages suitably qualified contractor(s) to undertake inspection and maintenance activities associated with our HV overhead power lines in the area. The qualifications of internal and external contractors are reviewed and verified before engagement to ensure they meet the minimum level established by the Victorian Electricity Supply Industry (VESI) and, therefore, the Australian Qualification Framework (AQF) requirements or equivalent.

All contractors and sub-contractors engaged to manage vegetation near electric power lines must have a minimum of Certificate II in ESI Powerline Vegetation Control – UET20312.

Verifications of all contractors and subcontractors is undertaken at the point of initial engagement utilising SHWFPL’s third party contractor management system, CM3, to ensure all qualifications and licenses are correct and up to date, insurances and health and safety documentations are valid and representative of the works that are to be undertaken. Regular auditing of contractors in this system is undertaken by the departmental HSEQ team.

In addition to the contractor management system, all contractors and subcontractors are subject to compliance with SHWFPL’s Contractors and Consultants Prequalification Procedure (GWA-HSE-PRC-0021 Contractors and Consultants Prequalification Procedure).

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11 Reg 6(l) the operation and maintenance plans for at-risk electric lines:

During a fire event

In the event of a fire in the Windfarm area, SHWFPL staff will immediately contact emergency services and respond as outlined in the site Emergency Response Plan. If a fire is confirmed and has the potential to impact High Voltage lines, suitably trained technicians will conduct appropriate High Voltage switching works, to isolate the supply if safe to do so.

Total Fire Ban days

The risk of certain work activities starting a fire or staff being caught in a dangerous environment as a result of a fire is extremely high on a Total Fire Ban (TFB) day. To help manage this risk, Goldwind Australia has guidelines, procedures, instructions and a hot works permit process that must be adhered to on TFB days, including declared High, Extreme or Catastrophic conditions under the National Fire Danger Rating system and as advised by the CFA/FRV.

On fire danger days declared as High, Extreme or Catastrophic under the National Fire Danger Rating system Goldwind Australia will defer High Voltage Switching Operations where practical or restrict operations to essential activities to maintain critical services. In the event a plant has experienced a High Voltage feeder fault, a visual inspection of the relevant feeders is conducted to ensure the fault has not initiated a fire.

The risk of the Wind Farm HV line starting a fire has been reduced through design. The lines are insulated (ABC) and each of the HV lines are protected by Vacuum circuit breakers, which are set to one shot lock out. The following elements of the protection relay are enabled:

- Phase overcurrent protection
- Earth fault protection

Fire danger period

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SHWFPL inspection and maintenance programs for asset condition and vegetation clearance are completed prior to the beginning of a fire danger period, to ensure electrical assets are clear and operating during this period. Therefore, maintenance operations around electrical assets during the fire danger period would be restricted to fault investigation or emergency works, lowering the risk of potential fire ignitions during this high-risk period.

The design features of the HV line (discussed above) also help to mitigate bushfire risk during the fire danger period.

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12 Reg 6 (m) the investigations, analysis and methodology adopted for the mitigation of the risk of fire ignition from its at-risk electric lines;

SHWFPL applies a condition-based maintenance approach to ensure mitigation of fire ignition risk from our at-risk electric line. Periodic inspections and works are undertaken to ensure the possibility of causing an ignition source from HV overhead lines is minimised by:

- Initially completing annual inspections and completing actions identified during inspections to maintain appropriate vegetation clearance. Reduced period if risks are shown to be low and annual inspections not warranted.
- As a minimum completing inspections every 3 years and repairing any identified defects during inspections to ensure electrical assets are in good working order and are operating in such a way as to mitigate the risk of fire ignition.

Any safety issues or incidents relating to the electrical assets are investigated using incident management system Viking. The incidents recorded in Viking are reviewed by a team of senior managers and assigned to the most appropriate person to action within a given time frame. The status of actions not completed within the specified time period is escalated to the next level in the organisational hierarchy through internal reporting processes. The peak point of escalation is the Managing Director.

The assignee of the Viking action will typically be directed to investigate and determine the root cause of the incident as outlined in the incident reporting and investigation procedure. Tasks undertaken to achieve this objective include:

- Site visits and information collection including photos and samples of materials.
- Conduct brain storming session with relevant people of various expertise if required
- Engage technically qualified persons (most instances a consultancy firm) to perform detailed analysis and recommend corrective actions to prevent recurrence of similar incident.

The risks associated with electrical assets (including bushfire risk) are reviewed annually. This process involves determining the consequence and likelihood of potential asset failure scenarios using the Risk Management Procedure - **GWA-HSE-PRC-0017** and evaluating the effectiveness of mitigation strategies currently in place. Risk ratings are used to determine and prioritise improved mitigation actions to reduce all risks to 'as low as practical'.

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13 Reg 6 (n (i-vi)) details of the processes and procedures by which the specified operator will:

As part SHWFPL's Audit and Inspection Procedure an audit and inspection schedule (GWA-CO-TMP-005, an Audit and Inspection Schedule is maintained and where required, either due to requirements of regulation or assessed risks, a yearly audit and inspection of the OHL is planned before the beginning of each fire season.

i. Monitor the implementation of the bushfire mitigation plan.

The Service Department have defined works planned for the upcoming twelve (12) month period, utilising a system that defines in detail; task, start/finish dates, percentage progress etc., for all its operational wind farm sites. This Plan is developed prior to the commencing operating period and involves departmental, site based and HSEQ management consultation and involvement and is undertaken by a dedicated regional Service Planner. The plan has been developed to incorporate components that are specific to the requirements of SHWF and is held as an overarching Annual Compliance Plan which is tracked using the Annual Compliance Tracker.

All requirements for compliance and preventative inspections and works are tracked in this high-level plan, including reviewing of the Bushfire mitigation Plan which is monitored weekly and reviewed monthly by senior departmental management and reported on by the Service Planner and Site Manager monthly.

Tasks that ensure the implementation of the plan are to be included on the Annual Compliance Plan and monitored accordingly.

ii. Audit the implementation of the plan.

The Bushfire Mitigation Plan will be audited by appropriately competent HSEQ employees in line with the requirements of the plan and evidence supporting the completion of items/tasks to confirm compliance.

iii. Identify any deficiencies in the plan or the plan's implementation

All deficiencies or non-conformances to the plan and its implementation will be noted in the audit and review of the plan by the appropriately competent HSEQ employee and logged in HSEQ reporting system, Myosh, as an action and non-conformance or opportunity for improvement to be rectified against the audit.

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iv. Change the plan and the plan's implementation to rectify any deficiencies identified under subparagraph.

All identified and recorded deficiencies and non-conformances required to be rectified will be included in the updated review of the Bushfire Mitigation Plan that is subsequently revised and updated at each review period or on identified deficiencies through the audit and review process.

v. Monitor the effectiveness of inspections carried out under the plan.

Inspections are reviewed through the WHS Audit process in line with consultation between the reviewing party, Goldwind Australia HSEQ Service department employees, and the Site Service Manager. As required, SHWFPL will seek independent, third-party intervention or review of the inspections to ensure quality standards are met for inspections and due diligence of inspecting parties.

All equipment utilised for inspections, thermal imaging cameras, are checked for correct operation and calibrated as required and in-line with manufacturer specifications.

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vi. *Audit the effectiveness of inspections carried out under the plan.*

WHS audit schedule encompasses reviews of inspections and documentations and identifies any opportunities for improvement and non-conformances. Inspection effectiveness does not form a direct audit item or outcome, however any discrepancies identified between inspections and onsite reviews are to be followed up with site and departmental management with further requirements for independent third-party verification of effectiveness of inspections to be instigated as required.

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14 Reg 6 (o) assistance to be provided to fire control authorities in the investigation of fires near at-risk electric lines.

SHWFPL has proactively developed positive and open cooperation with the Country Fire Authority (CFA) and Fire Rescue Victoria (FRV). Upon commissioning of the Wind Farm, FRV, the CFA and other emergency services will be invited to attend a site familiarization visit. The Project has provided DEECA with spatial data of the site to assist in the event of an emergency.

Bushfire planning and mitigation on the Wind Farm Site is undertaken in conjunction with these agencies. SHWFPL will assist Fire Control Authorities in their investigation of fires near our at-risk electric lines by:

- Assisting with safe access to assets
- Making assets safe before commencement of investigations including, where appropriate, isolating power
- Sharing appropriate information regarding an incident and related inspection or maintenance reports
- Inviting external authorities to attend incident investigations as required.

15 Referenced documents

Document Name	Version	Approval date
GWA-HSE-CHE-0023 Overhead Line Patrol and Visual Condition Inspection	1.1	20.08.2021
GWA-OM-CHE-0009 33KV Structure Inspection	1.0	11.12.2019
GWA-CO-TMP-005 Audit and Inspection Schedule	1.2	17.07.2022
GWA-HSE-PRC-0021 Contractors and Consultants Prequalification Procedure	4.0	27.09.2022
SHWF Line Clearance Management Plan	4.0	19.04.2022
Goldwind-SHWF Overhead Line Maintenance Report	N/A	01.10.2022
Electrical Line Clearance Inspection Report 0479230124	N/A	24.01.2023