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Department of Planning and Environment  
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Parramatta NSW 2150

BHB-AGL-HS-GEN-0089

27<sup>th</sup> April 2023

Dear Katrina,

**SSD – 11437498: Extended working hours bimonthly report (April 2023)**

AGL Energy Limited (**AGL**) received development consent under section 4.38 of the NSW *Environmental Planning and Assessment Act 1979* to construct the Broken Hill Battery Energy Storage System (**Project**) at Broken Hill, NSW on 8<sup>th</sup> September 2021. Following a request for modification of that development consent, revised conditions were granted by the Department on 15<sup>th</sup> July 2022 for SSD 11437498-Mod-1.

On 28<sup>th</sup> February 2023, the Department provided approval to undertake works as requested at the following times:

- Monday to Friday 7am to 6pm
- Saturday 7am to 6pm
- Sundays and NSW Public Holidays 8am to 1pm

As a condition of this approval, AGL provides the first bimonthly report as requested, which includes details of works undertaken and complaints received. This is attached for your reference.

AGL intends to submit the next report by Friday 30<sup>th</sup> June 2023.

AGL takes its regulatory compliance responsibility seriously and is committed to good environmental practice. If you require any further information, please do not hesitate to contact Vicki Brady, Manager, Environment – Energy Hubs on [VBrady@agl.com.au](mailto:VBrady@agl.com.au) or 0499 304 473.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'Hamid Shilani', is written over a light blue horizontal line.

Hamid Shilani  
Project Director – Broken Hill Battery Project  
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**BROKEN HILL BATTERY ENERGY STORAGE SYSTEM** [SSD 11437498]

**OUT OF HOURS CONSTRUCTION WORK  
DPE BI-MONTHLY PROGRESS REPORT NO.1**

Valmec Document No.:

4017-RPT-HS-001

Rev: 0

	Name	Title	Signature	Date
<b>Originator:</b>	K. Brown	HSE Manager		18/04/2023
<b>Document Owner:</b>	R. Green	Operations Manager East Coast		18/04/2023



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## 1 INTRODUCTION

### 1.1 PURPOSE

To provide an *Out of Hours Work* (OOHW) Report to the Department of Planning and Environment (DPE) NSW every two months as specified in the approval letter which was received on the 28<sup>th</sup> of February 2023 by the DPE Director of Compliance.

The first report due 28 April 2023.

The report is to detail the progress of the project and address any complaints received.

### 1.2 SCOPE

For construction work to be conducted from 7am to 6pm on Saturdays and 8am to 1pm on Sundays and NSW public holidays for work outside normal construction hours which is 6am to 5pm from Mondays to Fridays.

The increase is for the duration of the project.

### 1.3 ROLES AND RESPONSIBILITIES

#### 1.3.1 Project Manager and Site Manager

- Overall responsibility for the implementation, monitoring and management of the extended work hours strategy inclusive of noise, vehicle movements and fatigue management.
- Compliance with all *working hours* within the boundaries of the development approval and consent for the project.
- Compliance with all *conditions* applied for working hours and associated activities within the development approval and consent for the project.

#### 1.3.2 Site Supervisors

- Management of approved working hours within the prescribed time-frames.
- Management of all activities and noise controls within the prescribed time-frames.
- Management of vehicle movements and noise within the extended work hours.
- Evaluation and control of fatigue related risk factors with all workers on the project.
- Monitoring of compliance with noise and vehicle movements and evaluation of control measures.

#### 1.3.3 Workers

- Compliance with the Extended Work Hours noise generation controls and vehicle movements.
- Management of change with noise and vehicle movement factors with associated controls.
- Identifying and reporting any potential or actual breach with noise generating activities and associated agreed controls.
- Monitoring self and others with noise generating activities.

#### 1.3.4 HSE Manager

- Assist with the implementation of the Extended Work Hours Strategy.
- Evaluate, monitor and report effectiveness with Extended Work Hours Strategy.
- Assist with the management of any complaints, resolution, reporting and corrective actions from noise producing activities.

### 1.4 DEFINITIONS

Term	Meaning
BESS	Battery Energy Storage System.
dBA	Noise measurement in decibels.
dBC	Measure of the strength of an instantaneous signal at radio frequency . The dBc increment is based on the decibel, a logarithmic measure of relative signal strength.
DC	Development Consent. Approval and a license to operate for the project within the boundaries of the conditions within the DC.



Term	Meaning
EIS	Environmental Impact Statement
JHEA	Job Hazard Environmental Analysis
NMLs	Noise Management Levels within Construction.
OOHW	Out of Hours Work
PCBU	Person Conducting Business or Undertaking for or on behalf of an organisation. A person in control of the work environment.
Time Weighting Fast	125 metres per second in dBA and dBC
Time Weighting Slow	1 time per second in dBA and dBC
WBS	Work Breakdown Structure of Plant and Machinery Noise Levels.

## 1.5 REFERENCES

- BESS Development Consent - SSD-11437498 (as modified) – Schedule 3 condition 13 Construction, Upgrading and Decommissioning Hours
- SSD – 11437498: Request to Amend Construction Working Hours
- Broken Hill Battery Letter Extension of Working Hours BHB-AGL-CX-0040
- 4017-PLA-HSE-021 BESS Extended Work Hours Strategy and Noise Report
- BESS OOHW Approval Letter – DPE 28/02/2023
- 4017-PLA-HS-008 BESS Fatigue Management Framework Extended Work Hours
- Appendix A – Plant and Equipment Machinery Work Breakdown Structure – Noise Controls
- Appendix B – Reporting Period Construction Progress and Weekly Lookaheads
- Appendix C – Altrad Integrated Reporting (AIR) System
- Appendix D – Complaints Register
- Appendix E – BESS Fatigue Management Framework Extended Work Hours
- Appendix F – HSE Management and Operational Control Board – Daily Review and Sign On – Weekly RESET

## 2 PROGRESS REPORT – EXTENDED WORK HOURS

The following project report outlines current progress within the project from the inception of OOHW.

The project Fluence / Valmec Consortium shall manage noise related risks associated with the approved project controls for OOHW in context with planning considerations within the project life cycle and associated operational controls as specified within the approved submission by the Fluence / Valmec Consortium being the *4017-PLA-HSE-021 BESS Extended Work Hours Strategy and Noise Report*.

### 2.1 COMPLIANCE CONDITIONS WITH EXTENDED WORKING HOURS

The following conditions have been met during this reporting period with implementing and communicating the OOHW conditions and associated controls being:

- Machinery used during OOHW will only involve a pad roller, grader, 20-tonne and 6-tonne excavators, skid steer loader, truck and dog trailer and water cart;
- **No pile driving, jack hammering, use of air compressors and delivery of materials that may disrupt local roads will occur during the OOHW;**
- A complaints register will be developed; and
- The Construction Environmental Management Plan will be updated to reflect the OOHW.

### 2.2 PLANT AND EQUIPMENT USED FOR EXTENDED CONSTRUCTION WORK HOURS AND NOISE ASSESSMENT

A detailed listing of equipment used within this reporting period for extended work hours and associated construction noise assessments from an initial baseline survey is detailed in **Appendix A – Plant and Equipment Work Breakdown Structure – Noise Controls**, and includes the following plant and equipment:

- 6 Tonne Excavator;
- 25 Tonne 320 Cat Excavator;
- Skid Steer Loader;
- Pad Roller;
- Truck and Dog Trailer; and
- Water Cart.

### 2.3 OPERATIONAL CONTROLS

The following operational controls have been established within the Extended Work Hours Strategy and Framework for implementation, monitoring, evaluating and controlling, which includes:

- Duties of a PCBU and persons in management and control of a workplace to understand and apply such duties as required by section 20 of the NSW WHS Act, inclusive of extended hours obligations and associated conditions.
- Noise generating activities and controls defined daily and weekly with operational controls documented on the Job Hazard Environmental Analysis (JHEA) with noise activities and monitored for compliance.
- Wind factors evaluated and monitored daily to establish wind direction, noise carry and associated controls.
- Noise assessments conducted for peak periods or noisy equipment to confirm boundary noise compliance.
- Controls with noisy activities complied with for Saturdays, Sundays and Public Holidays. Refer to *Section 2.1 Compliance Conditions with Extended Working Hours* of this report.



## 2.4 PROGRESS OF THE PROJECT

The reporting period includes Construction Weekly Lookaheads and overall progress with construction works and OOHW activities. Refer to **Appendix B – Reporting Period Construction Progress and Weekly Lookaheads**.

## 3 COMPLAINT PROCESS FOR EXTENDED WORKING HOURS

A complaint process has been established as detailed in the:

- 4017-PLA-GE-002 - Stakeholder Management Plan; and
- 4017-PLA-GE-003 - Regulatory Compliance Plan.

**To confirm no complaints have been submitted within this reporting period for OOHW.**

All complaints are formerly submitted within the Altrad Information Reporting (AIR) System and events recorded in the Project Complaints Register. Refer to:

- *Appendix C – Altrad Integrated Reporting (AIR) System*
- *Appendix D – Complaints Register*

## 4 CONCLUSION

The controls established for OOHW with construction activities have been communicated with the project workforce and integrated within the *4017-PLA-HS-008 BESS Fatigue Management Framework Extended Work Hours*. Communication of such controls were also re-communicated onsite on Monday the 6<sup>th</sup> of March at the weekly RESET and Toolbox. Refer *Appendix E - BESS Fatigue Management Framework Extended Work Hours*.

Controls for OOHW activities are monitored and evaluated daily and weekly with operational controls which are documented and detailed within the workgroups *Job Hazard Environmental Analysis (JHEA)* which are formerly reviewed and RESET each Monday by each workgroup.

All JHEAs are aligned to Safe Work Method Statements, Permit to Works and are handwritten, verified, and approved by the Principal Contractor Valmec Australia Site Manager and Site HSE Manager to manage risk, opportunity and change.

Such documentation is also verified daily by the onsite AGL client representative.

Oversight is also provided 3 weekly by the AGL HSE Manager for Energy Hubs who attends site to verify HSE activities and supports any project requirements proactively.

Valmec Australia submits this first report for OOHW and encourages any feedback from the Department of Planning and Environment to ensure the project is meeting all obligations as specified.

Kind Regards

### **Kester Brown**

Health, Safety and Environmental Manager  
Community Stakeholder and Relationship Manager  
BESS Project – 74-80 Pinnacles Place Broken Hill  
Valmec Australia Pty Ltd  
M: 0419 418 507



*Valmec acknowledges the Traditional Custodians of the lands and waters on which we operate. We continue to pay our respects to Elders past, present, and emerging. We respect their spiritual connection to Country and acknowledge their ongoing and important role in their community.*





## APPENDIX A – PLANT AND EQUIPMENT WORK BREAKDOWN STRUCTURE – NOISE CONTROLS

Activity	Equipment	Location	dBA Time Weighting Measurement Fast	dBA Time Weighting Measurement Slow	Comments
Boundary Noise Measurements with all plant and equipment operating within Construction Footprint.	<ul style="list-style-type: none"> <li>6 Tonne Excavator</li> <li>25 Tonne 320 Cat Excavator</li> <li>Skid Steer Loader</li> <li>Pad Foot Roller</li> <li>Truck and Dog Trailer</li> <li>Water Cart</li> </ul>	North Boundary - Central Reading	51.1 dBA	50.3 dBA	Equipment and activities were focused on Area 1 of BESS at the time of the survey which is the North Eastern Half of Stage 1.  The Pad Foot Roller and Water Cart were operating centrally to the project.
		North West Corner Boundary Reading	48.2 dBA	50.4 dBA	
		North East Corner Boundary Reading	64.9 dBA	72.4 dBA	
		East Boundary - Central Reading	68.9 dBA	60.0 dBA	
		South East Corner Boundary Reading	51.4 dBA	51.7 dBA	
		South Boundary - Central Reading	49.9 dBA	53.2 dBA	
		South West Corner Boundary Reading	47 dBA	50.5 dBA	
		West Boundary – Central Reading	47.9 dBA	50.5 dBA	
Boundary Noise Measurement from Outside of Construction Footprint.	All equipment in operation.	Outside of eastern Boundary 15 metres from Construction Fence line on North Eastern Side and eastern Side.	59.6 dBA	66.3 dBA	First Reading Taken on North Eastern side of boundary.  Second Reading Taken Eastern Side of Boundary Centrally, with 6 Tonne Excavator reversing.
			57.4 dBA	61.7 dBA	



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Activity	Equipment	Location	dBA Time Weighting Measurement Fast	dBA Time Weighting Measurement Slow	Comments
Earth Grid Trenching	6 Tonne Excavator	South East of Area 1.	69.1 dBA 78 dBA (Reversing)	73.9 dBA 80 dBA (Reversing)	Reading taken 8 metres from Excavator Operating. Second reading with Excavator reversing with Squawker on.
Excavations for Control Room	25 Tonne 320 Cat Excavator	North East Corner of Area 1.	65.4 dBA	74.1 dBA	Reading taken 12 metres from Excavator Operating on N/E Corner Boundary.
Installing Bedding Sand in Trenches	Skid Steer Loader	South East of Area 1.	67.7 dBA 74.5 dBA	70.0 dBA 77.8 dBA	First reading taken 6 metres from operations. Second reading taken 2 metres from operations.
Pad Foot Rolling Operations with Vibration on	Pad Foot Roller	Operating North to South in Stage 1 Area 2.	76.9 dBA 76.0 dBA	82.3 dBA 79.0 dBA	First reading taken 2 metres from operations. Second reading taken with Vibration on 4 metres from operations.
Bedding Sand Delivery	Truck and Dog Trailer	Operating North to South Stage 1 in Area 2.	63.8 dBA	67.4 dBA	Reading taken 4 metres from operations.
Water Cart Operations	Water Cart	Operating North to South Stage 1 in Area 2. Hand watering in area 1, due to limited access.	51.6 dBA	53.8 dBA	Reading taken 4 metres from operations.



## **APPENDIX B – REPORTING PERIOD CONSTRUCTION PROGRESS AND WEEKLY LOOKAHEADS**

The following construction schedules outline activities with project progress aligned with OOWH conditions and include the following periods:

- February 13<sup>th</sup> – 4<sup>th</sup> March
- March 6<sup>th</sup> – 18<sup>th</sup>
- March 20<sup>th</sup> – 1<sup>st</sup> April
- April 3<sup>rd</sup> – 16<sup>th</sup>
- April 17<sup>th</sup> – 22<sup>nd</sup>





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APPENDIX B2 – CONSTRUCTION PROGRESS – MARCH 6<sup>TH</sup> – 18<sup>TH</sup>

BESS - Construction Activity Schedule - March 6th - 18th				Easter 7/4 & 10		lookahead 1 week 22					lookahead 2 week 23									
Item	ZONE	Major Event	WP#	Task	Detail	current wk start/end		week 22					week 23							
						%	%	s	m	t	w	t	f	s	s	m	t	w	t	f
1	Area One	Excavation of trenches for Bedding Sand			B4 culverts															
2				Pier Drilling for Switchyard		0														
3				Excavate & clean out trenches RMU3 across to 22KV switch yard		0														
4				Excavate all trenches in - to switchyard.		5														
5				Excavate Generator pad		0														
6		Installation of Conduit	E	Continue zone 1A conduit installs across to switch yard	Electricians	50														
7			E	Conduits install into Culverts -includes haunching concrete		30														
8				Secondary battery conduits after install of culverts	GTE	20														
9		Backfill Conduits		Complete Area 1A across to switchyard to 80% }SY piers	RMU final outstending	75														
10		Culvert Installation		Complete cross section and tape and grout joints	at north	0	0													
11				Transport and Set-in place culverts	West to East run	50														
12				Final location and height signoff	East to west run	0														
13				Tee Junction formwork		10														
14			E	Install ladder racking into culverts --pre drill has commenced		0	0													
15			E	Fit flexible conduits to culverts and seal		0														
16		SwitchYard		Pour concrete piers and complete pile caps and holdowns		0														
17			Mech	Erect steel work		0														
19		Earthing Cables	E	Excavate and install area 1A backbone as priority	Ongoing	80														
20			E	Terminate earth leads to control buildings and bat pads		7														
21		Foundation for RMU 1 and 3		Excavate and Install conduits,blinding and insitu		0														
22				Insitu pour foundation slabs position RMU 3		0														
23		Battery precast found	E	Punchlist prior to equipment landing	Ben Boyd	0														
24		Foundation for Generator		In situ pour		0														
		<i>Equipment Installation</i>																		
25		Transformers #6		Transformer placement, out conduits to level	AGL reviewed	0														
		RMU # 1		Placement		0														
27		Invertor		Trim conduits to height, grout and then placement (Punchlist first)		0														
		CRT		Install onto pad B25 and B26		0														
28		Cable Pulling		Area 1 (pre current) cable schedule developed, ladder in place		0														
29	Area TWO	Excavation / bedding trenches																		
				Excavate culvert to CRT conduits																
30				Mark out and level B39/40 to B41/B42		95														
30.8				Mark out and excavate T10 to RMU 3		0														
32				Mark out and excavate T11 spiders		50														
33		Installation of Conduits		T6 to RMU 2 and T7 to RMU2	GTE	80														
34				Mark out and trench RMU 2 to switchyard and T6 and T7 culvert to CRT including earth backbone.	waiting 4 survey	0														
35		Backfill and compact to sub		Compact, hydrate and backfill A2 platform ( from trench excavation)		75														
36		Backfill and compact to sub		Upgrade temp swale formation south boundary		0														
37		Earthing Cables		Excavate and install area 2C ie T7 and T10		50														
38		Transformer BLINDING		Prep 4 insitu formwork to be erected	T8/9 blind in 22/	0	10													
39		Foundation for Transformers		First pour followed by wall and plinth sequence		0														
40		Battery precast foundation		Level and compact, ready 4 foundation pads landing		0														
41				Install precasts		0														
42		Other		Remove East Fence and compact new fence line		0														
43				Remove west fence and compact swale area	Includes stockpile	0														
44				Battery cube delivery - 8 units per load for area 1	await FSR	0														







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APPENDIX B3 – CONSTRUCTION PROGRESS – MARCH 20<sup>TH</sup> – APRIL 1<sup>ST</sup>

BESS - Construction Activity Schedule - March 20th - 1st April					Easter 7/4 & 10		lookahead 2 week 24							lookahead 3 week 25							
item	ZONE	Major Event	WP#	Task	Detail	current wk start and end		week 24							week 25						
						start	end	m	t	w	t	f	s	s	m	t	w	t	f	s	
1	Area One	Excavation of trenches for Bedding Sand			B4 culverts	%	%	20	21	22	23	24	25	27	28	29	30	31	1		
2				Pier Drilling for Switchyard		0	0														
3				Excavate & clean out trenches RMU3 across to 22KV switch yard		0	0														
4				Excavate all trenches in - to switchyard.		5	5														
5				Excavate Generator pad and place blinding		0	0														
6		Installation of Conduit	E	Continue zone 1A conduit installs across to switch yard	Electricians	50	0														
7			E	Conduits install into Culverts -includes haunching concrete		10	0														
8				Secondary battery conduits install to culverts	GTE	20	45														
9		Backfill Conduits		Complete Area 1A across to switchyard to 80% (SY	RMU final outstanding	75	75														
10		Culvert Installation		Complete tee cross section and tape and grout joints	north south run	0	0														
11				Transport and Set-in place culverts	West to East run	50	75														
12				All flexible conduit install and grouting.		0	0														
13				Tee Junction formwork		10	0														
14		SwitchYard	E	Install ladder racking into culverts --pre drill has commenced		0	10														
16				Pour concrete piers and complete pile caps and holddowns		0	0														
17			Mech	Erect steel work		0															
18		Earthing Cables	E	Excavate and install area 1A backbone as priority	Ongoing	80															
19			E	Terminate earth leads to control buildings		7															
20		Foundation for RMU 3		Blinding and insitu pour		0	0														
21				Insitu pour foundation slabs position RMU 3		0															
22		Battery precast found.	E	Punchlist prior to equipment landing	Ben Boyd	0															
23		Foundation for Generator		In situ pour		0															
24		Equipment Installation				0															
25		Transformers x 6		Transformer placement, cut conduits to level	AGL review reqd	0		T2	T3					T12							
26		RMU x 1		Placement		0															
27		Inverter		Trim conduits to height, grout and then placement (Punchlist first)		0															
28		CRT		Install onto pad B25 and B26		0															
29		Cable Pulling		Transformer to transformer																	
30				Inverter to pad	Inverter																
31	Area TWO	Excavation / bedding trenches																			
32				Excavate culvert to Cub conduits - B4 install of earth backbone and tails																	
33				Markout and level B3/B40 to B4/B42		95															
34				Markout and excavate T10 to RMU 3		0															
35				Markout and excavate T11 spiders		50															
36		Installation of Conduit	E&C	T6 to RMU 2 and T7 to RMU2	GTE	80															
37				Markout and trench RMU 2 to switchyard and t6 and t7	waiting 4 survey	0															
38				T11 fingers.																	
41		Earthing Cables	E & C	Excavate and install area 2C ie T7 and T10		50															
43		Foundation for Transformers		First pour followed by wall and plinth sequence		0		t6	t7												
45				Install precasts		0															
46		Other		Remove East and West Fence and compact new fence line		0															





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50	STAGE 2	Transmission Corridor													
51				Finalise Work method statement in Workpack --- and ITF	AGL approval reqd	95									
52			<i>Zone J</i>	Clear fence line across to Transgrid property		0									
53				Erect temp fencing		0									
54				Install sediment control fence		0									
55				Survey first trench location and markout		0									
56				Complete any underground and overhead service locations and markups		0									
57				Excavate road and creek crossings and place bedding material		0									
58				Excavate open trench number 1 and place bedding sand		0									
59			<i>Zone 2&amp;3</i>	Document and lodge application for excavation permits		0									
60				Complete pot holing and earthgrid identification		0									
61				Complete all underground and overhead service locations and markups		0									
62				Clear fence line and erect fencing include Insulation Panels		0									
63				Backfill pond and install control swales to haul road		0									
64				Excavate open trench number 1		0									
65				Pull in Data& Earth & cables (thru conduits where reqd)		0									
66			All Zones	Install Data termination pits		0									
67				Backfill to trench no1		0									
68				Excavate open trench number 2		0									





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APPENDIX B5 – CONSTRUCTION PROGRESS – APRIL 17<sup>TH</sup> – 22<sup>ND</sup>

item	ZONE	Major Event	WP#	Task	Detail	Culvert % start and end		lookahead 4 week 28							
						start %	end %	m	t	w	t	f	s		
						17	18	19	20	21	22				
1	Area One	Excavation of trenches for Bedding Sand			B4 culverts										
2				Complete pad subgrade levelling & Pier Drilling for Switchyard		100	0								
3		Installation of Conduits	E	Continue zone 1A conduit installs across to switch yard	Electricians	50	0								
5		Backfill Conduits		Complete Area 1A across to switchyard to 80% { SY piers first}	RMU final outstanding	75	0								
6		Culvert Installation		Complete tee cross section and tape and grout joints	East to west run	45	0								
7				All flexible conduit install and grouting.		90	0								
8			E	Install ladder racking into culverts --pre drill completed		10	0								
11		Earthing Cables	E	Excavate and install area 1A backbone as priority	Ongoing	80									
12			E	Terminate earth leads to control buildings		7									
20				From Pads thru conduits into Culverts to Control room											
21		Cable Terminations		CRTs glanding and terminations		5	0								
22				Invertor cutouts install and terminate		5	0								
23				Control room 630mm..... and at AUX		0	0								
24	Area TWO	Excavation / bedding trenches													
25				Excavate culvert to Cub conduits - B4 install of earth backbone and tails		25	0								
26				Markout and level B39/40 to B41/B42		95									
28				Markout and excavate T11 spiders		50									
29		Installation of Conduits	E&C	T6 to RMU 2 and T7 to RMU2 and backfill/blind same	GTE	65	0								
31				T11 fingers .											
32		Earthing Cables	E & C	Excavate and install area 2B ie T7 and T10		10	0								
33		Foundation for Transformers		Insitu formwork to be erected [T11 last to complete]	T6 and T7 next	10	0								
38		Transformers x 6		Transformer placement, conduits encasement outstanding	Design review reqd	0		T10	T11						
39		Invertor		prepare landing platform		0									
40				Deliver and land onto foundation	need transformer in pl	0									
41		RMU 2 and 3		Placement		0									
42		Invertor		Trim conduits to height, grout and then placement (Punchlist first)		0									
43		Switchyard		INSTALL		0									
44		CRT		Install onto pad B35 and B46		0									
45		Cable Pulling		Transformer to transformer and terminate same		0									
46				Invertor to battery pad and terminate		0									



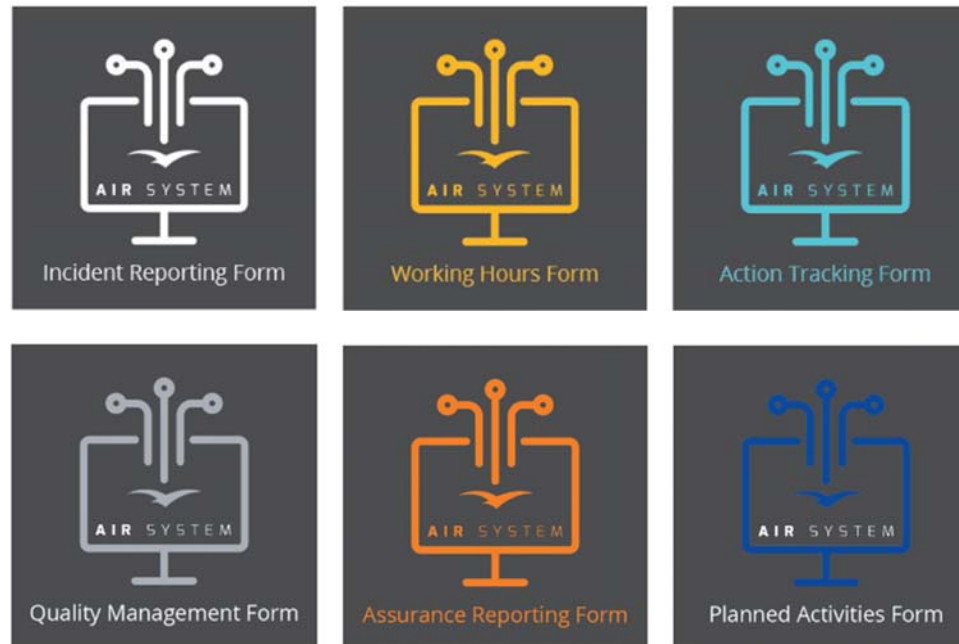


## APPENDIX C – ALTRAD INTEGRATED REPORTING (AIR) SYSTEM

### AIR System



The Altrad Integrated Reporting System (AIR System) is the Altrad Global reporting system which incorporates all Health, Safety, Quality and Environmental reporting elements.



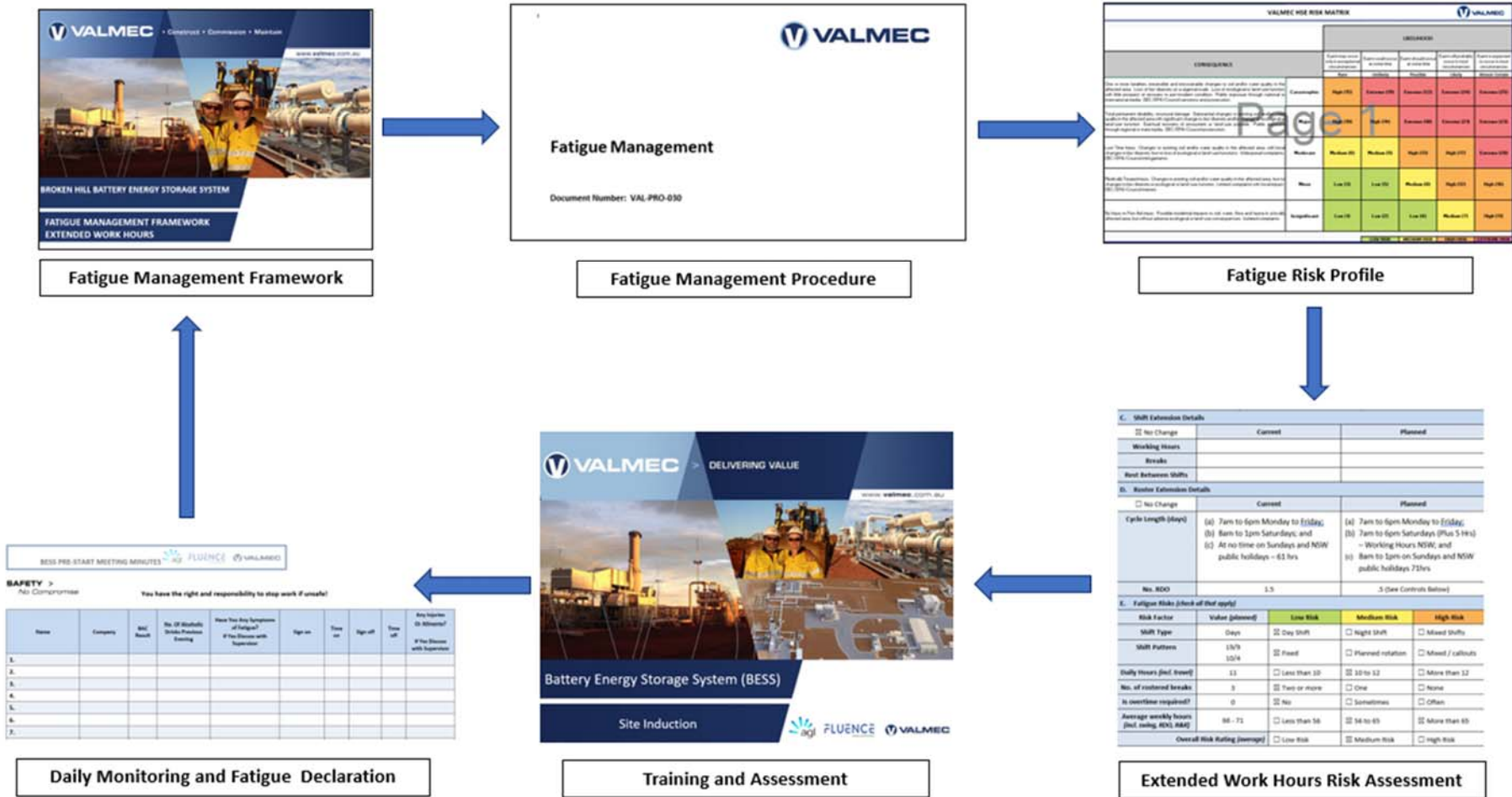




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APPENDIX E – BESS FATIGUE MANAGEMENT FRAMEWORK EXTENDED WORK HOURS



VALMEC HSE RISK MATRIX

CONSEQUENCE	DURATION				
	Less than 10 min	10 min to 1 hr	1 hr to 1 day	1 day to 1 week	More than 1 week
Minor	Low	Low	Low	Low	Low
Medium	Low	Medium	High	High	High
Major	Low	High	High	High	High
Critical	Low	High	High	High	High

C. Shift Extension Details

	Current	Planned
Working Hours		
Breaks		
Rest Between Shifts		

B. Breaker Extension Details

	Current	Planned
Cycle Length (days)	(a) 7am to 6pm Monday to Friday; (b) 7am to 1pm Saturdays; and (c) At no time on Sundays and NSW public holidays - 61 hrs	(a) 7am to 6pm Monday to Friday; (b) 7am to 6pm Saturdays (Plus 5 hrs) - Working hours NSW; and (c) 7am to 1pm on Sundays and NSW public holidays 71hrs
No. RDD	1.5	.3 (See Controls below)

E. Fatigue Risk (check off that apply)

Risk Factor	Value (planned)	Low Risk	Medium Risk	High Risk
Shift Type	Days	<input checked="" type="checkbox"/> Day Shift	<input type="checkbox"/> Night Shift	<input type="checkbox"/> Mixed Shifts
Shift Pattern	12/12	<input checked="" type="checkbox"/> Fixed	<input type="checkbox"/> Planned rotation	<input type="checkbox"/> Mixed / Callouts
Daily Hours (incl. break)	11	<input type="checkbox"/> Less than 10	<input type="checkbox"/> 10 to 12	<input type="checkbox"/> More than 12
No. of rostered breaks	3	<input checked="" type="checkbox"/> Two or more	<input type="checkbox"/> One	<input type="checkbox"/> None
Is overtime required?	0	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Sometimes	<input type="checkbox"/> Often
Average weekly hours (incl. swing, RDD, RDD)	66 - 71	<input type="checkbox"/> Less than 56	<input checked="" type="checkbox"/> 56 to 65	<input type="checkbox"/> More than 65
Overall Risk Rating (average)		<input type="checkbox"/> Low Risk	<input checked="" type="checkbox"/> Medium Risk	<input type="checkbox"/> High Risk

BESS PRE-START MEETING MINUTES

SAFETY > No Compromise. You have the right and responsibility to stop work if unsafe!

Name	Company	ABC Result	No. of Absence/Shifts/Problems/Incidents	Have You Any Symptoms of Fatigue? If Yes Describe with Supervisor	Sign on	Time on	Sign off	Time off	Any Reports to Supervisor?
1.									
2.									
3.									
4.									
5.									
6.									
7.									



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**APPENDIX F – HSE MANAGEMENT AND OPERATIONAL CONTROL BOARD – DAILY REVIEW AND SIGN ON – WEEKLY RESET**

