

Date : 12/11/2020 12:42:49 PM

From : "James Haig"

To : "CUBIS Mick"

Subject : FW: Fire behaviour estimates for the QF4-20-116117 Fraser Island Fire

Attachment : Fire Behaviour Summary QF4-20-116117 Fraser Island Fire.pdf;image001.jpg;

This is the information I have from this morning as discussed, a second email follows with more mapping which may help more

Good to talk with you earlier mate.

Regards

James

James Haig

Superintendent

Executive Manager Bushfire Mitigation

Office Of Bushfire Mitigation, Rural Fire Service

Queensland Fire and Emergency Services

P 07 3635 3883 M Personal info



From: SOC Plan Model Predict Unit <SOC.PlanModelPredictUnit@qfes.qld.gov.au>

Sent: Thursday, 12 November 2020 11:21 AM

To: PSU Reports NCR <PSUReportsNCR@qfes.qld.gov.au>

Subject: Fire behaviour estimates for the QF4-20-116117 Fraser Island Fire

Good morning NCR,

Please find attached the fire behaviour estimates for the QF4-20-116117 Fraser Island Fire.

Assumptions used to develop these estimates:

- These fire behaviour estimates have been developed using the forest fire behaviour model and 19t/ha fuel load.
- Latest Gridded Weather Forecast issued by the BOM this morning.

Key messages for the next 24 hours:

- Winds are forecast to shift NE today and peak at around 20km/h by 14:00hrs.
- Wind speeds overnight are forecast to remain above 13km/h.
- Overnight relative humidity recovery tonight will be poor (max 83%) allowing the fire to continue to spread overnight.

Key messages for the remainder of the forecast period:

- Winds are forecast to shift more northerly early tomorrow morning and increase to around 27km/h by 17:00hrs.
- Poor overnight Relative Humidity recovery again on Friday night.
- Winds are forecast to shift to the NNW on Saturday and will increase in speed from early in the morning peaking at around 33km/h around midday.

If you require any further information please don't hesitate to contact the On-Call FBAN on 3635 1808.

Regards

Francis Hines

Fire Behaviour Analyst

State Operations Centre

Queensland Fire and Emergency Services | State Operational Coordination Branch

Level 2 Disaster Management Centre | 125 Kedron Park Rd | Kedron Q4031

To contact the On-Call FBAN please call 3635 1808.

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RTI Act 2009



Forecast Fire Behaviour & Weather Summary

Published by QFES Predictive Services Unit (PSU). For assistance, further predictive products or expert fire behaviour advice call (All Hours) (07) 3635 1808 or e-mail PSU@qfes.qld.gov.au

STEP 1 - Select Location
FRASER ISLAND

STEP 2 - ROS Model
Forest

STEP 3 - Forest Fuel Load (t/ha)
19.00t/ha

STEP 4 - Heath Height (m)
0.0m

STEP 5 - Slope (Degrees)
0Deg

STEP 6 - Select Days
All

Choose Wildfire or HRB
Wildfire Behaviour Guidance

This extract contains weather for 1 locations.

Today's (Thursday, 12 November 2020) Peak Fire Behaviour Guidance in the Vicinity of

FRASER ISLAND, NORTH COAST Region and MARYBOROUGH Rural Area, in Forest Fuel

Based on BOM Forecast Data Updated @ 12/11/2020 7:45:35 AM

FIRELINE SAFETY: Expect about 0hr today where Direct Attack on the headfire maybe unsafe, i.e. above fireline intensity of 4,000kW/m

WIND & SPREAD: Peak daily wind speed is forecast to be 20km/h so in Forest expect rates of spread near 305m/hr

EASE OF IGNITION/SPREAD: With FMC today reaching as low as 6% Fuels / spot fires can ignite extremely easily and develop very fast.

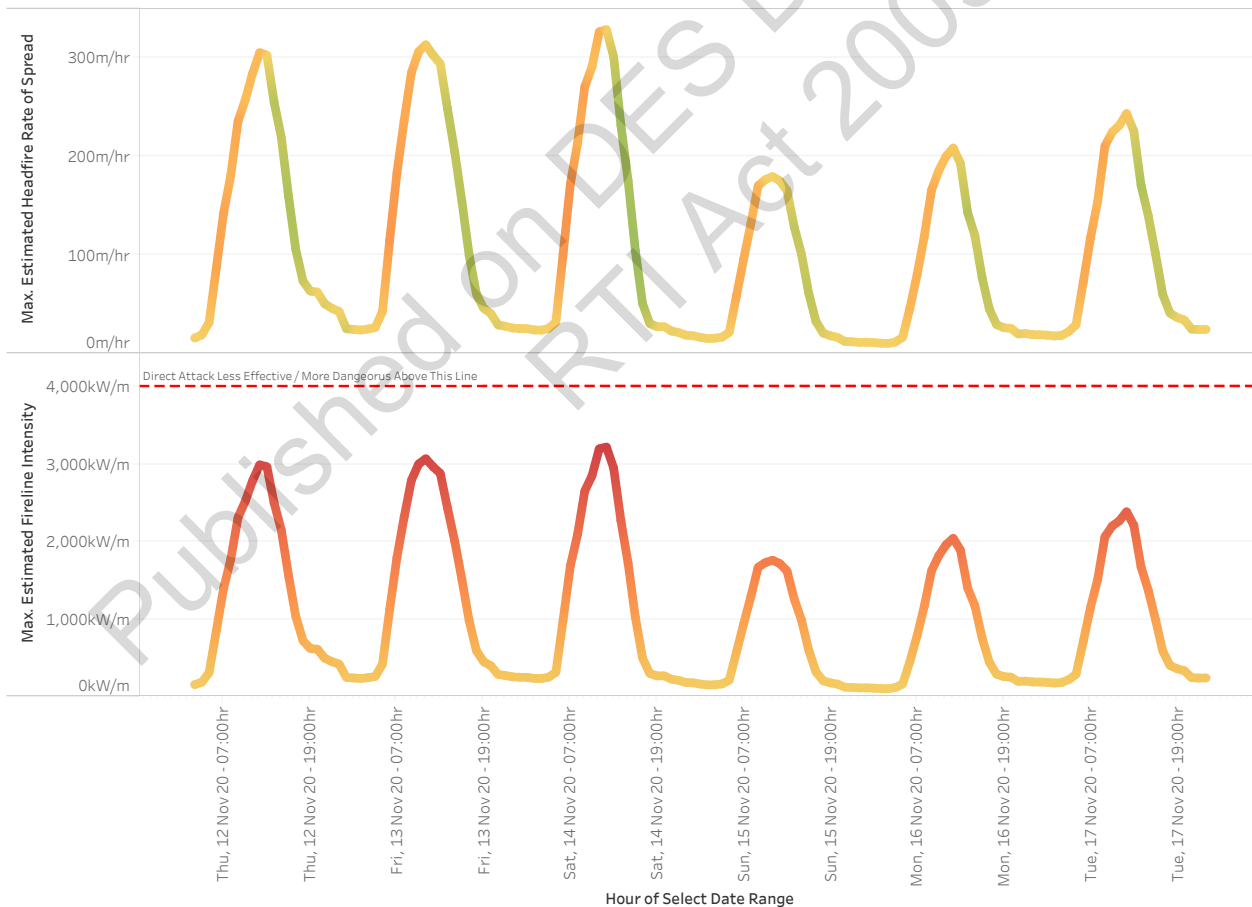
CONDITIONS TONIGHT: Between 1800hr & midnight fire is likely to continue burning for around 6hr (i.e. hours below Fuel Moisture of 20%)

With a forecast peak daily fireline intensity of 2991kW/m in Forest fuel, Direct Attack on the head fire / backburning are likely to be SAFE and EFFECTIVE strategies with max spotting distance during the day estimated to be up to 970m with an estimated peak daily forward rate of spread of 305m/hr. Fire behaviour is likely to be a moderately vigorous, readily spreading surface fire, possibly with some sporadic torching / flaring possible. Fires closer to 4000kW/m intensity can be more challenging, especially if the fuels are prone to ember production and spotting.

Estimated Rate of Spread (top) and Fireline Intensity (Bottom) Through Time

for Thu, 12 Nov 20 - 03:00hr to Tue, 17 Nov 20 - 23:00hr in Forest

Fuel Load currently in use for: Forest Load = 19t/ha



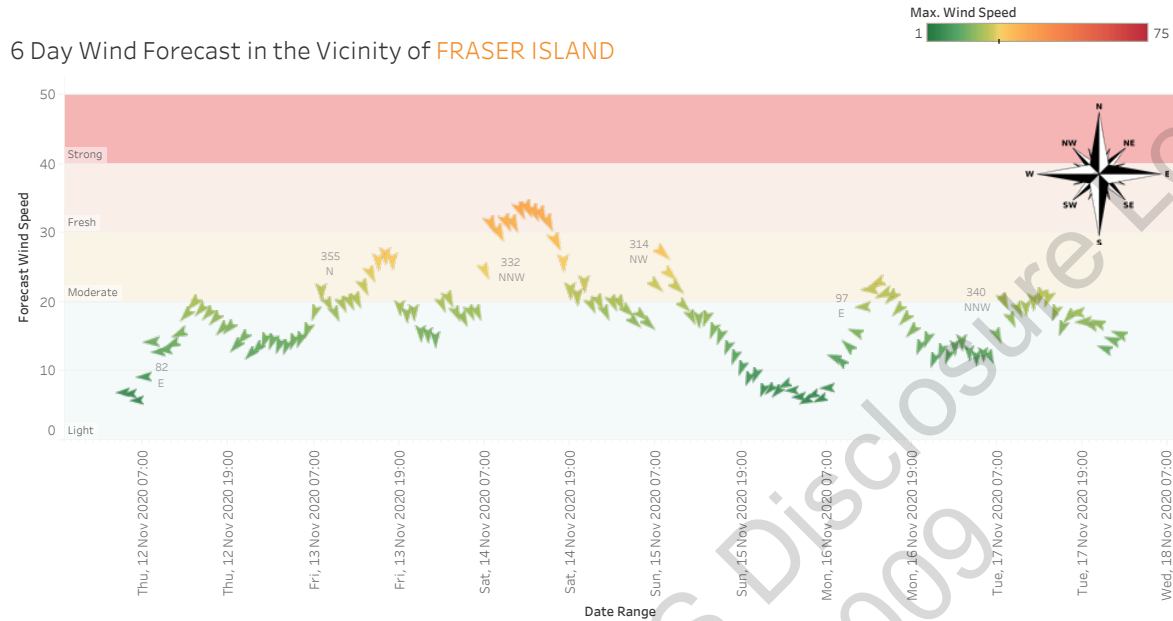
Disclaimer

This Fire Behaviour Prediction Snap Report ('this Report') is provided solely for information purposes and is not to be construed, under any circumstances, by implication or otherwise, as anything other than as the opinions of the Queensland Fire and Emergency Services Predictive Services Unit in relation to anticipated fire behaviour. The information contained in this Report is provided on the basis that readers will be responsible for making their own assessment of the information contained herein.



6 Day Look Ahead - Estimated Peak Daily Forest Fire Danger Index for FRASER ISLAND

	Thu, November 12, 2020	Fri, November 13, 2020	Sat, November 14, 2020	Sun, November 15, 2020	Mon, November 16, 2020	Tue, November 17, 2020
FRASER ISLAND	13.4 High	13.7 High	14.4 High	7.9 Low-Moderate	9.1 Low-Moderate	10.7 Low-Moderate



Choose Wildfire or HRB
Wildfire Behaviour Guidance

3 Day Look Ahead - Daily Peak Wildfire Behaviour Guidance in the Vicinity of FRASER ISLAND in NORTH COAST Region, MARYBOROUGH Rural Area assuming Forest Fuel

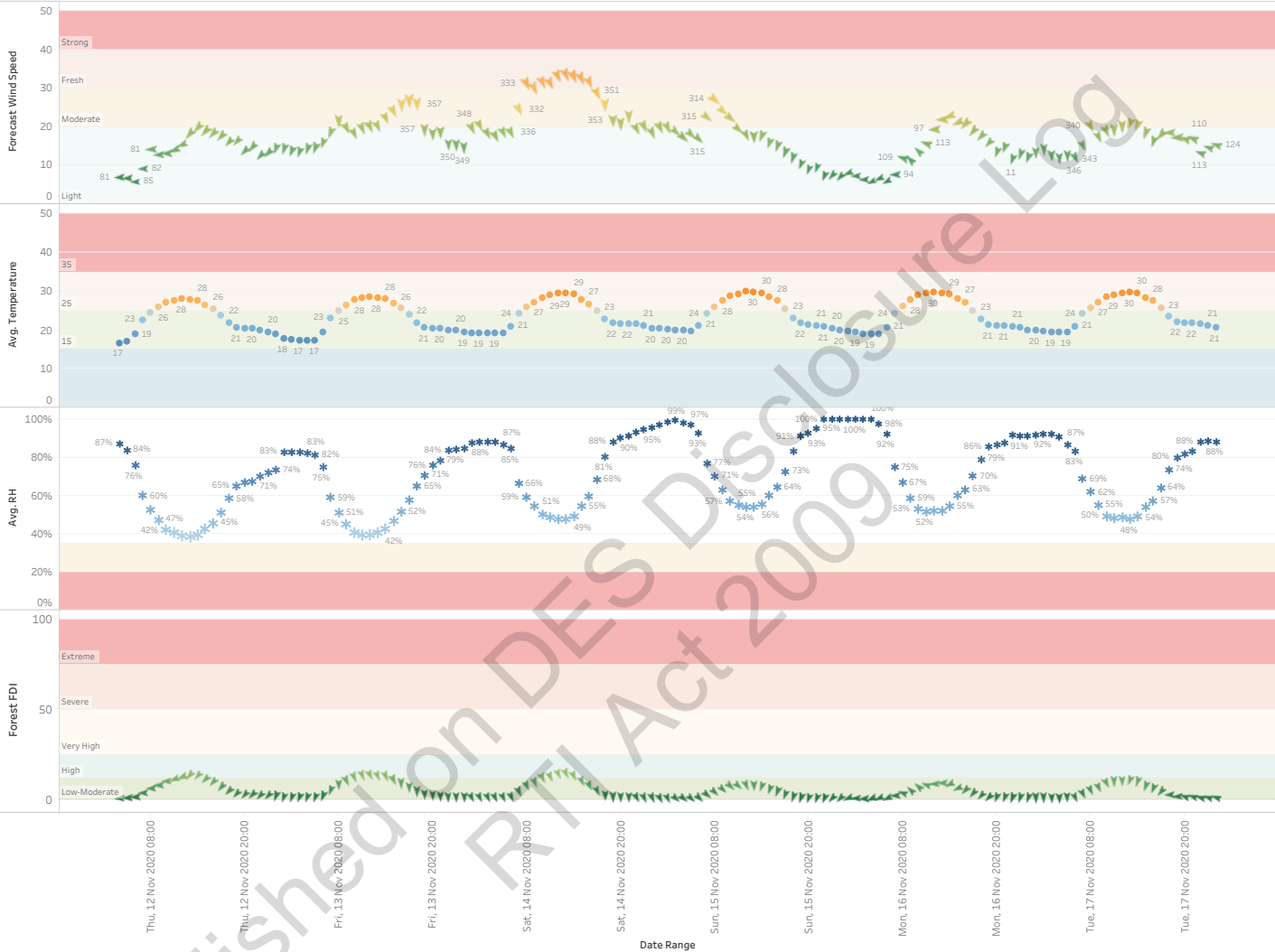
Friday, 13 November 2020	With a forecast peak daily fireline intensity of 3070kW/m in Forest fuel, Direct Attack on the head fire / backburning are likely to be SAFE and EFFECTIVE strategies with max spotting distance during the day estimated to be up to 995m with an estimated peak daily forward rate of spread of 313m/hr. Fire behaviour is likely to be a moderately vigorous, readily spreading surface fire, possibly with some sporadic torching / flaring possible. Fires closer to 4000kW/m intensity can be more challenging, especially if the fuels are prone to ember production and spotting.
Saturday, 14 November 2020	With a forecast peak daily fireline intensity of 3221kW/m in Forest fuel, Direct Attack on the head fire / backburning are likely to be SAFE and EFFECTIVE strategies with max spotting distance during the day estimated to be up to 1044m with an estimated peak daily forward rate of spread of 328m/hr. Fire behaviour is likely to be a moderately vigorous, readily spreading surface fire, possibly with some sporadic torching / flaring possible. Fires closer to 4000kW/m intensity can be more challenging, especially if the fuels are prone to ember production and spotting.
Sunday, 15 November 2020	With a forecast peak daily fireline intensity of 1759kW/m in Forest fuel, Direct Attack on the head fire / backburning are likely to be SAFE and EFFECTIVE strategies with max spotting distance during the day estimated to be up to 570m with an estimated peak daily forward rate of spread of 179m/hr. Fire behaviour is likely to be a low vigour, slowly spreading surface fire.

-----END OF REPORT-----

6 Day Look Ahead - Estimated Peak Daily FFDI / Fire Danger Rating for FRASER ISLAND

	Thu, November 12, 2020	Fri, November 13, 2020	Sat, November 14, 2020	Sun, November 15, 2020	Mon, November 16, 2020	Tue, November 17, 2020
FRASER ISLAND	13.4 High Drought Factor 10 Curing 44%	13.7 High Drought Factor 10 Curing 44%	14.4 High Drought Factor 10 Curing 44%	7.9 Low-Moderate Drought Factor 10 Curing 44%	9.1 Low-Moderate Drought Factor 10 Curing 44%	10.7 Low-Moderate Drought Factor 10 Curing 44%

6 Day Weather Graphs Forecast in the Vicinity of FRASER ISLAND



Detailed Weather Forecast in the Vicinity of FRASER ISLAND in NORTH COAST Region,
MARYBOROUGH Rural Area

Source: Bureau of Meteorology Gridded Weather. This information may have changed since time of release.

Hour of Select Date Range	Forest Fire Danger Rating	Cardinal Wind Dir	Estimated Ignition / Carry Potential	Temperature (C)	Humidity (%)	Wind Direction (Degrees)	Wind Speed (km/hr)	FFDI	GFDI	Fine Fuel Moisture (%)
Thu, 12/11/20 03:00	Low-Moderate	E	Unlikley to ignite	17	87%	81	7	1	0.0	21
Thu, 12/11/20 04:00	Low-Moderate	E	Unlikley to ignite	17	84%	88	7	1	0.0	19
Thu, 12/11/20 05:00	Low-Moderate	E	Difficult to ignite	19	76%	85	6	1	0.0	15
Thu, 12/11/20 06:00	Low-Moderate	E	Moderately Readily	23	60%	82	9	4	0.0	9
Thu, 12/11/20 07:00	Low-Moderate	E	Very Readily	24	53%	81	14	6	0.0	8
Thu, 12/11/20 08:00	Low-Moderate	E	Very Readily	26	47%	86	13	8	0.0	7
Thu, 12/11/20 09:00	Low-Moderate	E	Very Readily	27	42%	84	13	10	0.1	6
Thu, 12/11/20 10:00	High	ENE	Extremely Readily	28	40%	75	14	11	0.1	6
Thu, 12/11/20 11:00	High	ENE	Extremely Readily	28	39%	63	15	12	0.1	6
Thu, 12/11/20 12:00	High	NE	Extremely Readily	28	39%	44	18	13	0.1	6
Thu, 12/11/20 13:00	High	NE	Extremely Readily	28	40%	46	20	13	0.1	6
Thu, 12/11/20 14:00	High	NE	Very Readily	26	43%	48	19	11	0.1	6
Thu, 12/11/20 15:00	Low-Moderate	NE	Very Readily	26	45%	51	18	10	0.1	7
Thu, 12/11/20 16:00	Low-Moderate	NE	Very Readily	24	51%	52	18	7	0.1	8
Thu, 12/11/20 17:00	Low-Moderate	NE	Moderately Readily	22	58%	52	16	5	0.0	9
Thu, 12/11/20 18:00	Low-Moderate	NE	Moderately Readily	21	65%	53	16	3	0.0	11
Thu, 12/11/20 19:00	Low-Moderate	NE	Moderately Readily	20	67%	43	14	3	0.0	11
Thu, 12/11/20 20:00	Low-Moderate	NE	Moderately Readily	20	68%	42	15	3	0.0	12
Thu, 12/11/20 21:00	Low-Moderate	NE	Patchy Ignition	20	71%	44	13	2	0.0	13
Thu, 12/11/20 22:00	Low-Moderate	NE	Patchy Ignition	20	72%	39	13	2	0.0	13
Thu, 12/11/20 23:00	Low-Moderate	NNE	Patchy Ignition	19	74%	27	14	2	0.0	14
Fri, 13/11/20 00:00	Low-Moderate	NNE	Unlikley to ignite	18	83%	29	14	1	0.0	18
Fri, 13/11/20 01:00	Low-Moderate	NNE	Unlikley to ignite	18	83%	24	14	1	0.0	18
Fri, 13/11/20 02:00	Low-Moderate	NNE	Unlikley to ignite	17	83%	17	14	1	0.0	18
Fri, 13/11/20 03:00	Low-Moderate	NNE	Unlikley to ignite	17	83%	9	14	1	0.0	18
Fri, 13/11/20 04:00	Low-Moderate	NNE	Difficult to ignite	17	82%	7	15	1	0.0	18
Fri, 13/11/20 05:00	Low-Moderate	NNE	Difficult to ignite	19	75%	5	16	2	0.0	14
Fri, 13/11/20 06:00	Low-Moderate	NNE	Moderately Readily	23	59%	2	19	5	0.1	9
Fri, 13/11/20 07:00	Low-Moderate	N	Very Readily	25	51%	355	21	8	0.1	8
Fri, 13/11/20 08:00	Low-Moderate	NNW	Very Readily	26	45%	348	20	10	0.1	7
Fri, 13/11/20 09:00	High	NNW	Extremely Readily	28	40%	341	18	12	0.1	6
Fri, 13/11/20 10:00	High	NNW	Extremely Readily	28	40%	339	20	13	0.1	6
Fri, 13/11/20 11:00	High	NNW	Extremely Readily	29	40%	337	20	14	0.1	6
Fri, 13/11/20 12:00	High	NNW	Extremely Readily	28	41%	335	20	13	0.1	6
Fri, 13/11/20 13:00	High	NNW	Very Readily	28	42%	341	22	13	0.1	6
Fri, 13/11/20 14:00	Low-Moderate	NNW	Very Readily	27	47%	347	24	11	0.1	7
Fri, 13/11/20 15:00	Low-Moderate	N	Very Readily	26	52%	352	26	9	0.1	8
Fri, 13/11/20 16:00	Low-Moderate	N	Moderately Readily	24	57%	354	27	7	0.1	9
Fri, 13/11/20 17:00	Low-Moderate	N	Moderately Readily	22	65%	357	26	4	0.1	11
Fri, 13/11/20 18:00	Low-Moderate	N	Patchy Ignition	21	71%	357	19	3	0.0	12
Fri, 13/11/20 19:00	Low-Moderate	N	Difficult to ignite	20	76%	355	18	2	0.0	14
Fri, 13/11/20 20:00	Low-Moderate	N	Difficult to ignite	20	79%	352	19	2	0.0	15
Fri, 13/11/20 21:00	Low-Moderate	N	Difficult to ignite	20	84%	350	15	1	0.0	17
Fri, 13/11/20 22:00	Low-Moderate	N	Difficult to ignite	20	85%	351	15	1	0.0	17
Fri, 13/11/20 23:00	Low-Moderate	N	Difficult to ignite	19	85%	349	15	1	0.0	18



Forecast Weather Summary

Day Number
Multiple values

Detailed Weather Forecast (2) in the Vicinity of FRASER ISLAND in NORTH COAST Region, MARYBOROUGH Rural Area

Source: Bureau of Meteorology Gridded Weather. This information may have changed since time of release.

Hour of Select Date Range	Forest Fire Danger Rating	Cardinal Wind Dir	Estimated Ignition/ Carry Potential	Temperature (C)	Humidity (%)	Wind Direction (Degrees)	Wind Speed (km/hr)	FFDI	GFDI	Fine Fuel Moisture (%)
Sat, 14/11/20 00:00	Low-Moderate	NNW	Unlikley to ignite	19	88%	348	20	1	0.0	19
Sat, 14/11/20 01:00	Low-Moderate	NNW	Unlikley to ignite	19	88%	346	20	1	0.0	19
Sat, 14/11/20 02:00	Low-Moderate	NNW	Unlikley to ignite	19	88%	345	18	1	0.0	19
Sat, 14/11/20 03:00	Low-Moderate	NNW	Unlikley to ignite	19	88%	341	18	1	0.0	19
Sat, 14/11/20 04:00	Low-Moderate	NNW	Unlikley to ignite	19	87%	339	19	1	0.0	19
Sat, 14/11/20 05:00	Low-Moderate	NNW	Difficult to ignite	21	85%	336	19	1	0.0	17
Sat, 14/11/20 06:00	Low-Moderate	NNW	Moderately Readily	24	66%	332	25	4	0.1	10
Sat, 14/11/20 07:00	Low-Moderate	NNW	Moderately Readily	26	59%	333	31	8	0.1	9
Sat, 14/11/20 08:00	Low-Moderate	NNW	Very Readily	27	55%	331	30	9	0.1	8
Sat, 14/11/20 09:00	High	NNW	Very Readily	28	51%	330	32	12	0.2	7
Sat, 14/11/20 10:00	High	NNW	Very Readily	29	49%	332	31	13	0.2	7
Sat, 14/11/20 11:00	High	NNW	Very Readily	29	48%	333	33	14	0.2	7
Sat, 14/11/20 12:00	High	NNW	Very Readily	29	48%	341	34	14	0.2	7
Sat, 14/11/20 13:00	High	NNW	Very Readily	29	49%	343	33	13	0.2	7
Sat, 14/11/20 14:00	Low-Moderate	NNW	Very Readily	28	55%	343	33	10	0.2	8
Sat, 14/11/20 15:00	Low-Moderate	NNW	Moderately Readily	27	60%	348	32	8	0.1	9
Sat, 14/11/20 16:00	Low-Moderate	NNW	Moderately Readily	25	68%	349	29	5	0.1	11
Sat, 14/11/20 17:00	Low-Moderate	N	Difficult to ignite	23	81%	351	26	2	0.1	15
Sat, 14/11/20 18:00	Low-Moderate	N	Difficult to ignite	22	88%	353	22	1	0.0	18
Sat, 14/11/20 19:00	Low-Moderate	N	Unlikley to ignite	22	90%	352	21	1	0.0	19
Sat, 14/11/20 20:00	Low-Moderate	N	Unlikley to ignite	22	91%	349	23	1	0.0	19
Sat, 14/11/20 21:00	Low-Moderate	NNW	Unlikley to ignite	22	93%	346	20	1	0.0	20
Sat, 14/11/20 22:00	Low-Moderate	NNW	Unlikley to ignite	21	95%	341	20	1	0.0	21
Sat, 14/11/20 23:00	Low-Moderate	NNW	Unlikley to ignite	20	96%	337	18	1	0.0	22
Sun, 15/11/20 00:00	Low-Moderate	NNW	Unlikley to ignite	20	97%	331	20	1	0.0	22
Sun, 15/11/20 01:00	Low-Moderate	NNW	Unlikley to ignite	20	99%	331	20	1	0.0	24
Sun, 15/11/20 02:00	Low-Moderate	NW	Unlikley to ignite	20	99%	323	19	1	0.0	24
Sun, 15/11/20 03:00	Low-Moderate	NW	Unlikley to ignite	20	98%	320	17	1	0.0	23
Sun, 15/11/20 04:00	Low-Moderate	NW	Unlikley to ignite	20	97%	320	18	1	0.0	23
Sun, 15/11/20 05:00	Low-Moderate	NW	Unlikley to ignite	21	93%	315	17	1	0.0	20
Sun, 15/11/20 06:00	Low-Moderate	NW	Patchy Ignition	24	77%	315	23	3	0.1	13
Sun, 15/11/20 07:00	Low-Moderate	NW	Moderately Readily	26	71%	314	27	4	0.1	11
Sun, 15/11/20 08:00	Low-Moderate	NW	Moderately Readily	28	63%	315	24	6	0.1	9
Sun, 15/11/20 09:00	Low-Moderate	NW	Very Readily	29	57%	319	22	7	0.1	8
Sun, 15/11/20 10:00	Low-Moderate	NW	Very Readily	29	55%	325	20	8	0.1	8
Sun, 15/11/20 11:00	Low-Moderate	NNW	Very Readily	30	54%	336	18	8	0.1	7
Sun, 15/11/20 12:00	Low-Moderate	N	Very Readily	30	54%	349	17	8	0.1	7
Sun, 15/11/20 13:00	Low-Moderate	NNE	Very Readily	30	56%	1	18	7	0.1	8
Sun, 15/11/20 14:00	Low-Moderate	NNE	Moderately Readily	29	60%	10	16	6	0.1	8
Sun, 15/11/20 15:00	Low-Moderate	NNE	Moderately Readily	28	64%	18	15	4	0.0	9
Sun, 15/11/20 16:00	Low-Moderate	NNE	Moderately Readily	25	73%	19	13	3	0.0	12
Sun, 15/11/20 17:00	Low-Moderate	NNE	Difficult to ignite	23	84%	21	12	1	0.0	15
Sun, 15/11/20 18:00	Low-Moderate	NNE	Unlikley to ignite	22	91%	23	10	1	0.0	19
Sun, 15/11/20 19:00	Low-Moderate	NNE	Unlikley to ignite	21	93%	3	9	1	0.0	20
Sun, 15/11/20 20:00	Low-Moderate	NNE	Unlikley to ignite	21	95%	20	9	1	0.0	21
Sun, 15/11/20 21:00	Low-Moderate	NNE	Unlikley to ignite	21	100%	30	7	1	0.0	24
Sun, 15/11/20 22:00	Low-Moderate	NE	Unlikley to ignite	20	100%	51	7	1	0.0	24
Sun, 15/11/20 23:00	Low-Moderate	NE	Unlikley to ignite	20	100%	47	7	0	0.0	24



Forecast Weather Summary

Day Number
Multiple values

Detailed Weather Forecast (3) in the Vicinity of FRASER ISLAND in NORTH COAST Region, MARYBOROUGH Rural Area

Source: Bureau of Meteorology Gridded Weather. This information may have changed since time of release.

Hour of Select Date Range	Forest Fire Danger Rating	Cardinal Wind Dir	Estimated Ignition / Carry Potential	Temperature (C)	Humidity (%)	Wind Direction (Degrees)	Wind Speed (km/hr)	FFDI	GFDI	Fine Fuel Moisture (%)
Mon, 16/11/20 00:00	Low-Moderate	ENE	Unlikley to ignite	20	100%	59	8	0	0.0	25
Mon, 16/11/20 01:00	Low-Moderate	E	Unlikley to ignite	19	100%	86	7	0	0.0	25
Mon, 16/11/20 02:00	Low-Moderate	E	Unlikley to ignite	19	100%	79	6	0	0.0	25
Mon, 16/11/20 03:00	Low-Moderate	ENE	Unlikley to ignite	19	100%	70	6	0	0.0	25
Mon, 16/11/20 04:00	Low-Moderate	ENE	Unlikley to ignite	19	98%	67	7	1	0.0	24
Mon, 16/11/20 05:00	Low-Moderate	ENE	Unlikley to ignite	21	92%	70	6	1	0.0	20
Mon, 16/11/20 06:00	Low-Moderate	E	Patchy Ignition	24	75%	94	8	2	0.0	13
Mon, 16/11/20 07:00	Low-Moderate	ESE	Moderately Readily	26	67%	109	12	3	0.0	10
Mon, 16/11/20 08:00	Low-Moderate	SE	Moderately Readily	28	59%	135	12	5	0.0	8
Mon, 16/11/20 09:00	Low-Moderate	SE	Very Readily	29	53%	128	14	7	0.1	7
Mon, 16/11/20 10:00	Low-Moderate	ESE	Very Readily	30	52%	113	16	8	0.1	7
Mon, 16/11/20 11:00	Low-Moderate	E	Very Readily	30	52%	97	19	9	0.1	7
Mon, 16/11/20 12:00	Low-Moderate	E	Very Readily	30	52%	83	22	9	0.1	7
Mon, 16/11/20 13:00	Low-Moderate	ENE	Very Readily	29	55%	72	23	8	0.1	7
Mon, 16/11/20 14:00	Low-Moderate	ENE	Moderately Readily	28	60%	61	21	6	0.1	8
Mon, 16/11/20 15:00	Low-Moderate	NE	Moderately Readily	27	63%	50	21	5	0.1	9
Mon, 16/11/20 16:00	Low-Moderate	NE	Moderately Readily	25	70%	46	19	3	0.1	11
Mon, 16/11/20 17:00	Low-Moderate	NE	Difficult to ignite	23	79%	36	18	2	0.0	14
Mon, 16/11/20 18:00	Low-Moderate	NE	Difficult to ignite	21	86%	37	16	1	0.0	17
Mon, 16/11/20 19:00	Low-Moderate	NNE	Difficult to ignite	21	87%	21	14	1	0.0	17
Mon, 16/11/20 20:00	Low-Moderate	NNE	Difficult to ignite	21	88%	17	15	1	0.0	18
Mon, 16/11/20 21:00	Low-Moderate	NNE	Unlikley to ignite	21	92%	11	12	1	0.0	20
Mon, 16/11/20 22:00	Low-Moderate	NNE	Unlikley to ignite	21	91%	4	13	1	0.0	20
Mon, 16/11/20 23:00	Low-Moderate	NNE	Unlikley to ignite	20	91%	1	12	1	0.0	20
Tue, 17/11/20 00:00	Low-Moderate	N	Unlikley to ignite	20	92%	359	13	1	0.0	20
Tue, 17/11/20 01:00	Low-Moderate	N	Unlikley to ignite	20	92%	356	14	1	0.0	21
Tue, 17/11/20 02:00	Low-Moderate	N	Unlikley to ignite	19	92%	354	13	1	0.0	21
Tue, 17/11/20 03:00	Low-Moderate	N	Unlikley to ignite	19	91%	351	12	1	0.0	20
Tue, 17/11/20 04:00	Low-Moderate	N	Unlikley to ignite	19	87%	354	12	1	0.0	19
Tue, 17/11/20 05:00	Low-Moderate	NNW	Difficult to ignite	21	83%	346	12	1	0.0	16
Tue, 17/11/20 06:00	Low-Moderate	NNW	Moderately Readily	24	69%	343	15	3	0.0	11
Tue, 17/11/20 07:00	Low-Moderate	NNW	Moderately Readily	26	62%	340	20	5	0.1	9
Tue, 17/11/20 08:00	Low-Moderate	NNW	Very Readily	27	55%	334	17	7	0.1	8
Tue, 17/11/20 09:00	Low-Moderate	NNW	Very Readily	29	50%	331	19	9	0.1	7
Tue, 17/11/20 10:00	Low-Moderate	N	Very Readily	29	48%	350	19	10	0.1	7
Tue, 17/11/20 11:00	Low-Moderate	N	Very Readily	30	49%	358	20	10	0.1	7
Tue, 17/11/20 12:00	Low-Moderate	NNE	Very Readily	30	48%	5	21	11	0.1	7
Tue, 17/11/20 13:00	Low-Moderate	NNE	Very Readily	30	50%	13	20	10	0.1	7
Tue, 17/11/20 14:00	Low-Moderate	NNE	Very Readily	28	54%	19	18	7	0.1	8
Tue, 17/11/20 15:00	Low-Moderate	NNE	Moderately Readily	28	57%	26	16	6	0.1	8
Tue, 17/11/20 16:00	Low-Moderate	NE	Moderately Readily	26	64%	45	18	4	0.1	10
Tue, 17/11/20 17:00	Low-Moderate	E	Patchy Ignition	23	74%	92	19	3	0.0	12
Tue, 17/11/20 18:00	Low-Moderate	E	Difficult to ignite	22	80%	99	17	2	0.0	15
Tue, 17/11/20 19:00	Low-Moderate	ESE	Difficult to ignite	22	82%	107	17	2	0.0	15
Tue, 17/11/20 20:00	Low-Moderate	ESE	Difficult to ignite	22	84%	110	17	1	0.0	16
Tue, 17/11/20 21:00	Low-Moderate	ESE	Difficult to ignite	22	88%	113	13	1	0.0	18
Tue, 17/11/20 22:00	Low-Moderate	ESE	Unlikley to ignite	21	89%	119	15	1	0.0	18
Tue, 17/11/20 23:00	Low-Moderate	ESE	Unlikley to ignite	21	88%	124	15	1	0.0	18



Examples of Various Fireline Intensities (Note these are estimates)



Fire in surface fuels only
Flame Height = 0.5-1.0m,
Forward Rate of Spread = 50-100m/hr
Intensity ~ 200 to 400 kW/m
Direct Attack Very Safe / Very Effective



Fire in surface and bark fuels
Flame Height = 1.5 m (plus height of bark fires),
Forward Rate of Spread = 100-300 m/hr
Intensity ~ 500 to 1000 kW/m
Direct Attack Safe / Effective



Fire in Surface, Bark and Elevated Fuels
Flame Height = 1.5 to 3 m,
Forward Rate of Spread = 300-500 m/hr
Intensity ~ 1500 to 2500 kW/m
Direct Attack Safe / Effective



Fire in Surface, Bark and Elevated Fuels
Some Passive Crowning
Flame Height = 3 to 5 m,
Forward Rate of Spread = 500-1200 m/hr
Intensity ~ 3000 to 4000 kW/m
Direct Attack Safe / Effective (Upper end)



Fire in Surface, Bark and Elevated Fuels
Periodic Active Crowning
Flame Height = 5 to 10 m,
Forward Rate of Spread = 1200-2000 m/hr
Intensity ~ 4000 to 10000 kW/m
Direct Attack NOT Safe / NOT Effective



Fire in Surface, Bark and Elevated Fuels
Sustained Active Crowning
Flame Height > 10 m,
Forward Rate of Spread > 2000 m/hr
Intensity ~ > 10000 kW/m
Direct Attack NOT Safe / NOT Effective

Date : 12/11/2020 12:44:56 PM

From : "James Haig"

To : "CUBIS Mick"

Subject : FW: Unsuppressed fire spread prediction for QF4-20-116117 Fraser Island Fire from 10:00hrs 12/11/20 through until 21:00hrs 13/11/20

Attachment : 20201112_FraserIs.kmz;image002.png;image003.jpg;image004.jpg;

Second email.

Regards

James

James Haig

Superintendent

Executive Manager Bushfire Mitigation

Office Of Bushfire Mitigation, Rural Fire Service

Queensland Fire and Emergency Services

P 07 3635 3883 M **Personal**



From: SOC Plan Model Predict Unit <SOC.PlanModelPredictUnit@qfes.qld.gov.au>

Sent: Thursday, 12 November 2020 11:05 AM

To: PSU Reports NCR <PSUReportsNCR@qfes.qld.gov.au>

Subject: Unsuppressed fire spread prediction for QF4-20-116117 Fraser Island Fire from 10:00hrs 12/11/20 through until 21:00hrs 13/11/20

Good morning NCR,

Please find below and attached the unsuppressed fire spread prediction for the fire for onforwarding to QPWS.

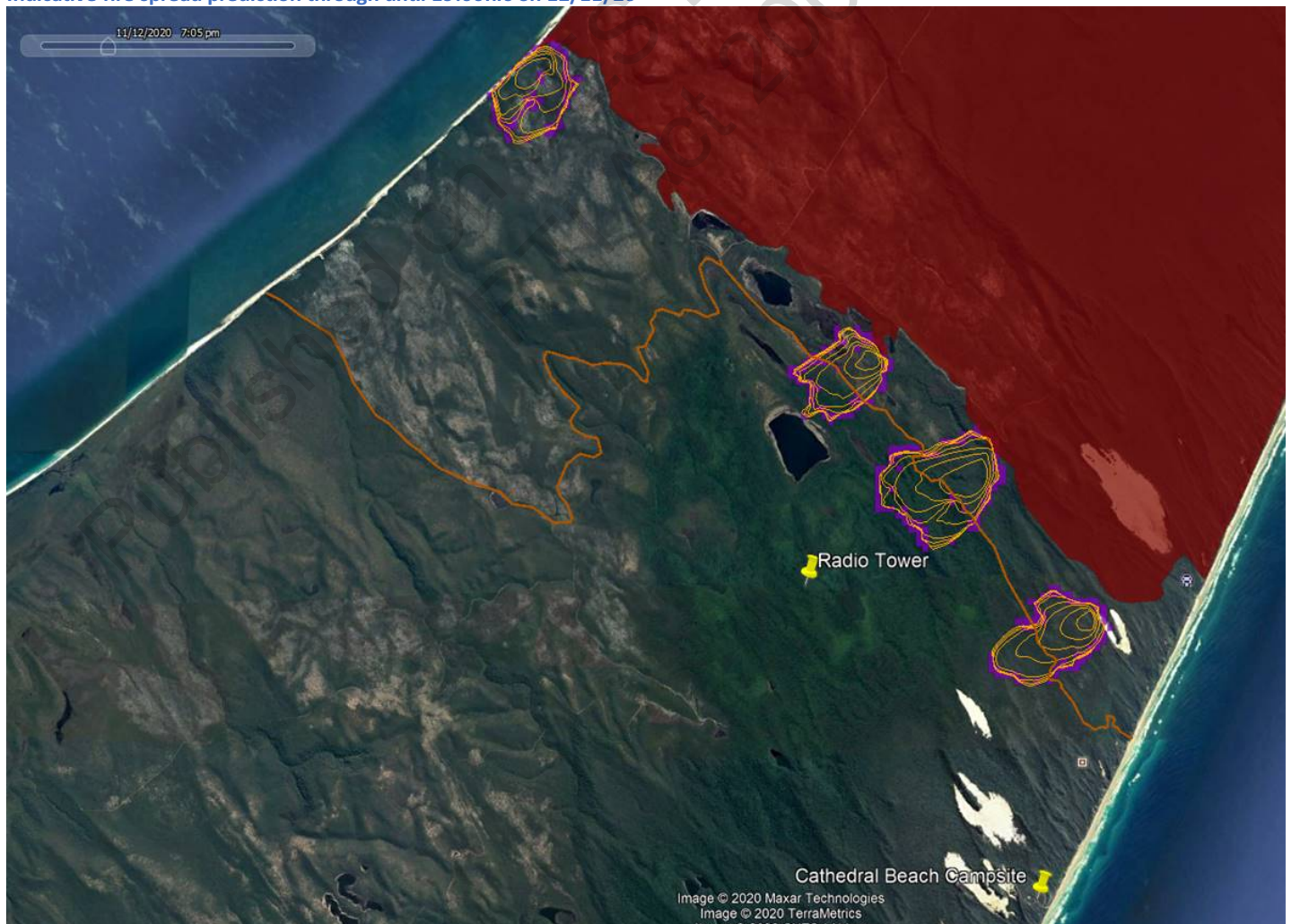
The prediction shows the unsuppressed fire spread for QF4-20-116117 Fraser Island Fire from 10:00hrs 12/11/20 through until 21:00hrs 13/11/20.

Fire spread is shown in hourly isochrones as orange lines and the self extinguishment as purple pixels.

Assumptions used to develop this prediction:

- Burnt area as mapped by Air Observer at 10:00hrs on 12/11/20 has been used.
- 4 point ignition points identified from active fire edges mapped by Air Observer at 10:00hrs on 12/11/20.
- No active fire suppression is being undertaken.
- No additional backburning has been undertaken.
- Gridded weather forecast issued by the BOM this morning.

Indicative fire spread prediction through until 19:00hrs on 12/11/20



Indicative fire spread prediction through until 21:00hrs on 13/11/20

Please note longer duration simulations are less reliable.



To view this prediction in Google Earth Pro:

- Please note you may need to install Google Earth Pro from Software Centre. To do this type Software Centre into the search bar on the bottom left hand side of your screen. The search for Google Earth Pro.
- Once installed simply double click on the attached KMZ File.

If you require any further information or assistance please don't hesitate to contact the On-Call FBAN on 3635 1808

Regards

Francis Hines

Fire Behaviour Analyst

State Operations Centre

Queensland Fire and Emergency Services | State Operational Coordination Branch

Level 2 Disaster Management Centre | 125 Kedron Park Rd | Kedron Q4031

To contact the On-Call FBAN please call 3635 1808.

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Date : 28/11/2020 4:13:52 PM

From : "James Haig"

To : "Gary McCormack" , "HEAD Damien"

Cc : "BROOK Scott" , "CUBIS Mick" , "CAMBOURN Neil" , "John Pappas"

Subject : QPWS closures plan for staged closures on Fraser Island central area

Attachment : Duling_WF_CLOSURE_planning_28112020_1200.docx;image001.jpg;

Please find attached the proposed staged closures for these tracks and campgrounds. These have been prepared by QPWS staff embedded within our joint IMT and approved by Deputy IC Scott Brook. This QPWS process reflects the authorising environment required to implement and the defined responsibilities within the IMT.

I endorse the attached proposals and confirm that they align with overall incident planning and have been informed by fire behaviour predictive modelling and other intelligence within our joint IMT.

I would also reiterate the comments that the tracks are becoming increasingly difficult to traverse and bogging of vehicles is a real issue.

We will reassess stage 2 triggers as new intelligence such as updated weather forecasts and predictive modelling is completed.

Once approved by QPWS as the authorising agency please advise me directly and I will update any public messaging as required.

Regards

James Haig

Incident Controller.

James Haig

Superintendent

Executive Manager Bushfire Mitigation

Office Of Bushfire Mitigation, Rural Fire Service

Queensland Fire and Emergency Services

P 07 3635 3883 M Personal info



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Fraser island closure planning 28/11/2020 – 15:00 PM

Rainbow Beach IMT - QPWS planning – Jack Hargreaves

NOTE: this plan covers the QPWS run divisions of the Duling W/F only.

IAP Context:

Priority remains the protection of life and property – particularly the communities of KBVR and Happy Valley (under control of Deputy IC Asset Protection).

Fire control lines remain difficult to traverse due to dryness of the sand. Visitor and fire crew welfare is to be considered in all movements around the island.

Control of fire across the landscape is unlikely for the next 5 days (fire weather). Mitigation of impact will be likely best outcome.

Key Fire update points of note;

1. No significant change from yesterday.
2. Closure planning is well advanced and due for IC approval at 12pm today. In short;
 - a. Trigger point is the loss of fire across the Smith Poyungan fire control line.
 - b. This will trigger closure of Kingfisher Bay Resort and implementation of the park closure plan involving the sweeping of remaining roads and visitor nodes south to Wangoolba Track.
 - c. Full detail in final plan.
3. With pending conditions and all associated complications, fire containment is unlikely for the next five days.
 - a. We are focussing upon impact mitigation, rather than high risk containment actions with limited chance of success.
 - b. Western Division maintains the fire north of the Smith Poyungan Fire control line.
 - c. Eastern Division is planning mitigation actions to reduce impact as the fire moves south along east coast over next five days.
4. We recognise the importance of recovery.
 - a. We are using local resources to inspect and prepare suitable sites for re-opening.
 - b. We want to enter discussions with QPWS management on Monday about Bushfire Rapid Assessment processes to start informing the impact of the fire.
 - i. I suspect that while broadscale, intensity mapping will show the impact to be less than a single fire extent polygon will indicate.
5. We were recently informed of one small structure burned 8km north of KFB. Investigations underway to find out what that was and associated implications.

STAGE 1: Immediate actions for implementation as of 24:00 28/11/2020

- Close all internal tracks to non-emergency vehicles – leaving the coast. So all tracks heading off the beach and onto the island north of Eurong.
 - This includes closing immediately Lake McKenzie, and all tracks leaving Eurong and Kingfisher to all non-emergency service vehicles.
 - Vehicles currently on these tracks are okay to leave, but no new vehicles to enter this area.
- Wangoolba to Eurong will REMAIN OPEN under stage 1.
- Central Station Campground – all campers encouraged to leave now but Central Station campground will be closed as of.

Key steps to execute this plan –

- QPWS staff to engage with visitors at Central Station
- Police to work with QPWS to execute closures
- QPWS to organise Park alert system with current information

STAGE 2: The trigger point to initiate stage 2 is the fire crossing the Smith-Poyungan track.

When the trigger point is reached, the following immediate action to commence;

- QFES to manage Kingfisher Bay per arrangement with KBRV management.
- Evacuate/Remove all remaining campers from Central Station (hopefully non left)
- Close from Eurong to Wangoolba Creek Rd North inland tracks on Fraser Island.
- No traversing of the island is to occur to meet ferry bookings – safest exit only.

Risk analysis background supporting decision;

- Significantly degraded track conditions across the island making it difficult to leave central camping area quickly.
- There are key tracks in the area that are one-way only, and currently in a very poor condition.
- Most campers at Central station have large camping set ups and are usually longer-term visitors. This means their camping set ups and/or families which means that they have generally significantly bigger set ups and will require more time to evacuate the area.
- Predictive modelling suggests the fire will take at least 3 days after crossing the Smith-Poyungan Road before it would impact Central Station.
- Vehicle traffic on the internal road network of the island is contributing to their degraded state and is increasing risk to emergency service who will rely on the road network
- There are no key landscape features, fuel type or fire scars to prevent, slow or restrict fire spread beyond the Smith-Poyungan Road
- Some visitors will have ferries booked on the opposite of the island and will attempt to cross the island to keep their booking.
 - This is a risk that needs to be managed with QPS.