



APPENDIX J AVIATION ADVICE LETTER

Lucy Baker
ERM
Level 1 Watt Street Commercial Centre
45 Watt Street
Newcastle, NSW
2300

By email: lucy.baker@erm.com

Our ref: 100505-05

Dear Lucy

Re: Hills of Gold Wind Farm – AIA Addendum

1.1. Background

Aviation Projects produced an Aviation Impact Assessment for the Hills of Gold Wind Farm (version 1.1 dated 16 November 2020) that has been provided to various agencies for consideration as part of the approvals process.

In response to the outcomes of ongoing stakeholder engagement, several changes to the Project layout and infrastructure have been proposed. Of the proposed changes, the following components require reassessment for aviation impact.

Wind Turbine Generators (WTGs) require reassessment:

- WTG 41 is proposed to be removed to create a 1.2 km buffer along Ben Halls Gap Nature Reserve that will:
 - Reduce bird and bat barrier effects; and
 - Reduce NPWS aerial firefighting concerns.
- 10 turbines (WTGs 2, 3, 4, 32, 35, 36, 39, 40, 64, 70) are to be relocated within 100 m of the previous location; and
- 10 turbines (WTGs 10, 11, 37, 38, 42, 43, 44, 45, 46, 47) are to be relocated within 350 m of the previous location.

The revised WTG layout is shown in ERM drawing Turbine Layout Amendments attached at the end of this report.

Aviation. From the ground up.

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Proposed changes to the following permanent and temporary components have also been considered and do not require reassessment for aviation impact.

- Access tracks to transmission lines
- Permanent ancillaries
- Permanent roads
- Quarry
- Transmission line hardstands
- Transport hardstands
- Temporary access tracks
- Blade Laydowns
- Internal pads and tracks
- Temporary ancillaries
- Transport swept path
- Western access.

1.2. Scope

The scope of work is to assess any changes to aviation impacts from the original Aviation Impact Assessment resulting from the revised Project layout and infrastructure.

This letter of advice will provide an addendum to the Aviation Impact Assessment to be attached to the client's Amendment Report 2.

1.3. Changes to WTG locations

1.3.1. Removal of WTG 41

WTG 41 will be removed to create a 1.2 km buffer along the Ben Halls Gap Nature Reserve. WTG 41 previously had a tip height of 1552.8 m AHD (5094.7 ft AMSL).

WTG 41 was not the highest (critical) WTG and was not previously identified as having any impact on airport flight procedures, minimum safe altitudes, or lowest safe altitudes.

The removal of WTG 41 does not change any impacts identified in the previous aviation impact assessment.

1.3.2. Relocation of WTGs

Table 1 provides a comparison between previous and new location and elevation height for 20 WTGs which will be relocated and identifies any new impacts resulting from the relocation.

Table 1 Relocated WTGs

<i>Wind turbine ID</i>	<i>Distance relocated (m approx.)</i>	<i>Previous Ground elevation (m AHD)</i>	<i>New Ground elevation (m AHD)</i>	<i>Wind turbine tip height based on a 230 m AGL turbine + 5 m buffer (m AHD / ft AMSL)</i>	<i>Impact of change</i>
2	84.89	1259.58	1263.18	1498.20 / 4915.35	nil
3	90.21	1254.73	1262.88	1497.85 / 4914.21	nil
4	63.86	1199.66	1198.99	1434.03 / 4704.82	nil
10	156.27	1160.41	1161.00	1395.99 / 4580.02	nil
11	103.18	1127.11	1120.41	1355.40 / 4446.85	nil
32	40.76	1319.68	1323.41	1558.43 / 5112.96	nil
35	60.87	1358.82	1354.27	1589.25 / 5214.07	nil
36	38.75	1365.77	1365.28	1600.31 / 5250.36	nil
37	107.19	1341.41	1358.03	1593.02 / 5226.44	nil
38	178.04	1336.23	1341.59	1576.56 / 5172.44	nil
39	30.84	1332.41	1336.68	1571.67 / 4979.23	nil
40	20.70	1282.26	1293.30	1528.34 / 5014.24	nil
42	191.07	1325.20	1358.60	1593.60 / 5228.35	nil
43	242.18	1373.12	1379.99	1614.99 / 5298.52	nil
44	341.53	1380.36	1387.07	1622.07 / 5321.75	nil
45	347.03	1383.04	1366.83	1601.83 / 5255.35	nil
46	269.28	1343.30	1329.94	1564.94 / 5134.31	nil
47	169.35	1351.77	1374.55	1609.55 / 5280.68	nil
64	97.06	1249.24	1245.67	1480.67 / 4857.84	nil
70	86 m	1212.26	1223.68	1458.68 / 4785.70	nil

1.4. Impact of Layout Changes

The highest wind turbine, WP20, with ground elevation of 1410 m Australian Height Datum (AHD) and overall height of 1646 m AHD (5400 ft above mean sea level (AMSL)), has not been relocated and remains the critical obstacle.

Removal of WTG 41 and relocation of 20 WTGs listed in Table 1 will not alter the conclusions and recommendations of the original aviation impact assessment.

There are no changes to the impacts previously identified for obstacle limitation surfaces (OLS), flight procedure (PANS-OPS) surfaces, grid and air route lowest safe altitudes (LSALTS), prescribed airspace or aviation navigation aids and communication facilities.

If you wish to clarify or discuss the contents of this correspondence, please contact me on 0417 631 681.

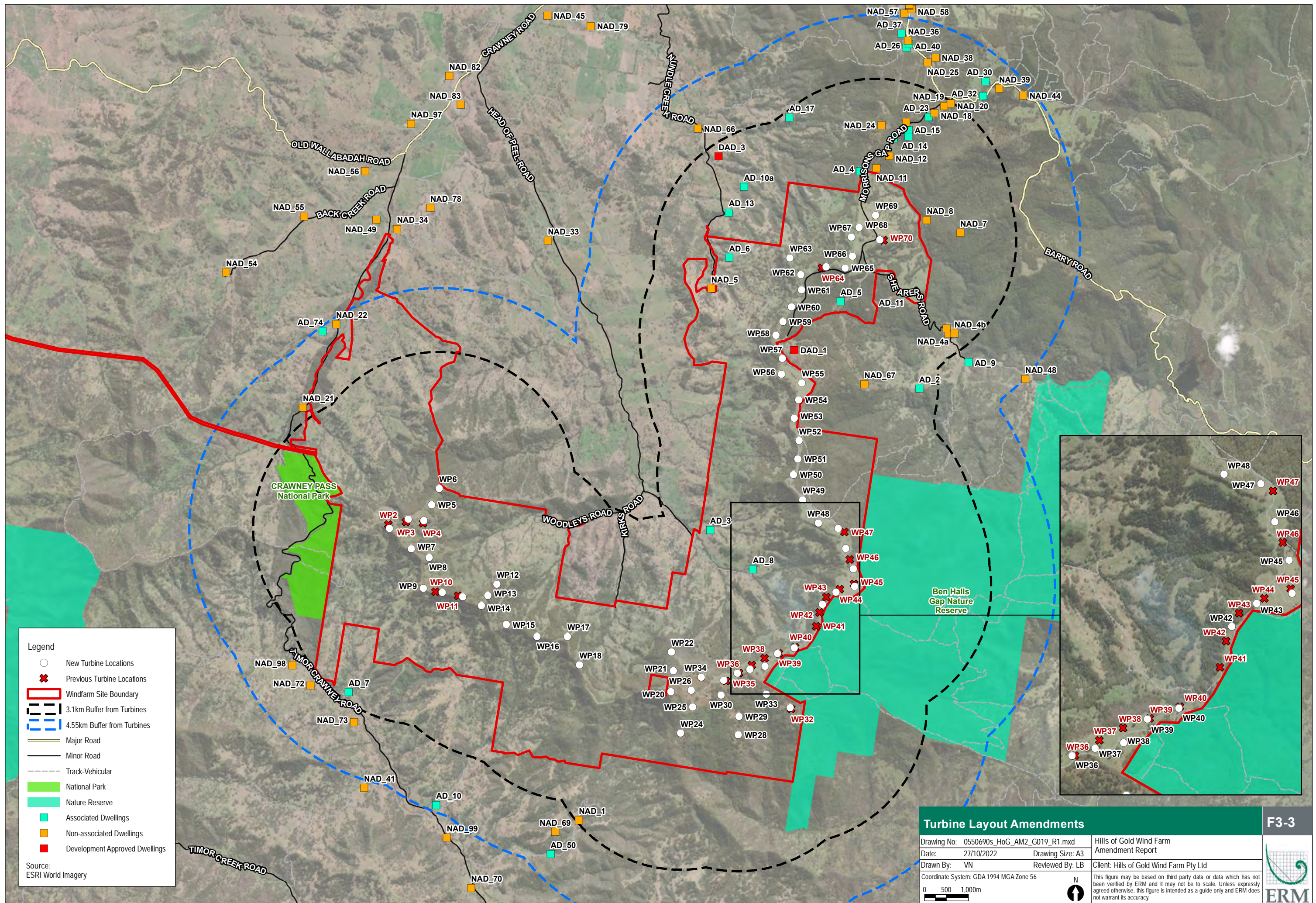
Kind regards



Keith Tonkin

Managing Director

03 November 2022



- Legend
- New Turbine Locations
 - Previous Turbine Locations
 - Windfarm Site Boundary
 - 3.1km Buffer from Turbines
 - 4.55km Buffer from Turbines
 - Major Road
 - Minor Road
 - Track-Vehicular
 - National Park
 - Nature Reserve
 - Associated Dwellings
 - Non-associated Dwellings
 - Development Approved Dwellings

Source:
ESRI World Imagery

Turbine Layout Amendments

Drawing No: 0550690s_HoG_AM2_G019_R1.mxd	Hills of Gold Wind Farm Amendment Report
Date: 27/10/2022	Drawing Size: A3
Drawn By: VN	Reviewed By: LB
Coordinate System: GDA 1994 MGA Zone 56	Client: Hills of Gold Wind Farm Pty Ltd
0 500 1,000m	This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.

F3-3

