

Lend Lease
Jordan Springs Project Office
PO Box 1870
Penrith NSW 2751

ECO LOGICAL AUSTRALIA PTY LTD
ABN 87 096 512 088
www.ecoaus.com.au

Attention: Nathan Croft

09SUTBUS-0001

30 November 2012

Dear Nathan,

RE: Bushfire Assessment following *Planning for Bushfire Protection 2006*: Proposed new dwellings within Stages 3A, 3B, 2A, 2B, 2C and 2D, Jordan Springs

1. Introduction

Lend Lease engaged Eco Logical Australia Pty Ltd (ELA) to provide a Bushfire Assessment for those lots in Stages 3A, 3B, 2A, 2B, 2C and 2D, Jordan Springs. The lots covered by this assessment are listed in the tables on the following page and the attached maps.

2. Purpose

This letter acts as a Bushfire Assessment prepared under *Planning for Bushfire Protection 2006* suitable:

- ✓ For a development application for a new dwelling (or additions to) on any lot listed where a bushfire assessment is required by Section 79BA or 79C of the *Environmental Planning & Assessment Act 1979*. This assessment satisfies Section 79BA Clause (1)(b) of the EP&A Act and acts as a certificate by a bushfire consultant recognised by the NSW Rural Fire Service as a qualified consultant in bushfire risk assessment.
- ✓ As a BAL (Bushfire Attack Level) Risk Assessment in accordance with the specifications and requirements of the *State Environmental Planning Policy (Exempt and Complying Development Codes) Codes SEPP* to accompany a Complying Development Certificate for a new dwelling (or additions to).

3. Bushfire Hazard and Subdivision Approval

A Bushfire Assessment was prepared by ELA for the above subdivision stages and subsequent approval was granted by NSW Rural Fire Service (RFS) and Penrith City Council. The hazard assessment and asset protection zone (APZ) recommendations within the ELA reports were consistent with the RFS requirements. The attached map identifies the approved hazard assessment and APZs. All required APZs have been provided as part of the subdivision design and surrounding land management. Similarly, the approved and constructed subdivision complies with the access, water, utility installation and landscaping requirements of *Planning for Bushfire Protection 2006*.

SUITE 4, 2-4 MERTON ST SUTHERLAND NSW 2232 | PO BOX 12 SUTHERLAND NSW 1499 T | 02 8536 8600 F | 02 9542 5622

ARMIDALE | BRISBANE | CANBERRA | COFFS HARBOUR | GOSFORD | NAROOMA | NEWCASTLE | PERTH
ST GEORGES BASIN | SUTHERLAND | SYDNEY | WOLLONGONG

4. BAL Assessment

The BAL assessment complies with *Planning for Bushfire Protection 2006* and *AS 3959-2009 Construction of buildings in bushfire-prone areas* and have been determined by a suitably qualified consultant in bushfire risk assessment.

This letter and the accompanying map certifies the BAL for dwellings on those lots affected by BAL-LOW and BAL-12.5 only.

Those lots affected by higher BALs (BAL-19, BAL-29 and BAL-40) are indicated on the map. BAL certification is not provided for these lots. It is recommended that an independant bushfire assessment report is commissioned to properly rate and apply the BAL to each facade based on the known dwelling design for lots impacted by higher BALs. The map can be used as a guide on what BALs may be expected. This approach ensures that the BAL assessment is accurate and allows for the correct reduction in BAL for shielded elevations or those dwellings affected by multiple BALs.

Table 1 on the following page provides the certification for those lots rated as BAL-LOW and BAL-12.5. The attached maps identify the location of the lots and the BALs.

This assessment conforms with the relevant specifications for a development application of a dwelling on bushfire prone land and acts a a certificate under Section 79BA Clause (1)(b) EP&A Act.

This assessment also acts as a BAL Risk Assessment Certificate under the Codes SEPP. This BAL Risk Assessment is valid until 12 months of the date of this letter. The Development Standards for Bushfire Prone Land within the Codes SEPP are not covered by this certificate.

Table 1: BAL certification

BAL-LOW									
a. Insufficient threat to warrant building construction standards under AS 3959-2009 <i>Construction of buildings in bushfire-prone areas</i>									
b. Dwelling will be greater than 100 m from the bushfire hazard									
c. The Development Standards for Bushfire Prone Land within the Codes SEPP are not assessed as part of this certificate									
2001	2075	2182	2239	2299	2995	3057	3114	3175	3238
2002	2076	2183	2240	2300	3001	3058	3115	3176	3239
2003	2077	2184	2241	2301	3002	3059	3116	3177	3240
2004	2078	2185	2242	2303	3003	3060	3117	3178	3241
2005	2079	2186	2243	2304	3004	3061	3118	3179	3242
2023	2080	2187	2244	2305	3005	3062	3119	3180	3243
2024	2081	2188	2245	2306	3006	3063	3120	3181	3244
2025	2082	2189	2246	2307	3007	3064	3121	3182	3245
2026	2083	2190	2247	2308	3008	3065	3122	3183	3246
2027	2084	2191	2248	2309	3009	3066	3123	3184	3247
2028	2085	2192	2249	2310	3010	3067	3124	3185	3248
2029	2086	2193	2250	2359	3011	3068	3125	3186	3249
2030	2087	2194	2251	2360	3012	3069	3126	3187	3250
2031	2088	2195	2252	2361	3013	3070	3127	3188	3251
2032	2089	2196	2253	2362	3014	3071	3128	3189	3252
2033	2090	2197	2254	2363	3015	3072	3129	3190	3253
2034	2091	2198	2255	2364	3016	3073	3130	3191	3254
2035	2092	2199	2256	2365	3017	3074	3131	3192	3255
2036	2093	2200	2260	2366	3018	3075	3132	3193	3256
2037	2094	2201	2261	2367	3019	3076	3133	3194	3257
2038	2095	2202	2262	2368	3020	3077	3134	3195	3258
2039	2096	2203	2263	2369	3021	3078	3135	3196	3259
2040	2097	2204	2264	2370	3022	3079	3136	3197	3260
2041	2098	2205	2265	2371	3023	3080	3137	3198	3261
2042	2099	2206	2266	2372	3024	3081	3138	3199	3262
2043	2100	2207	2267	2373	3025	3082	3139	3200	3263
2044	2101	2208	2268	2374	3026	3083	3141	3201	3264
2045	2102	2209	2269	2375	3027	3084	3145	3208	3265
2046	2125	2210	2270	2376	3028	3085	3146	3209	3266
2047	2126	2211	2271	2377	3029	3086	3147	3210	3267
2048	2127	2212	2272	2378	3030	3087	3148	3211	3268
2049	2128	2213	2273	2379	3031	3088	3149	3212	3269
2050	2129	2214	2274	2380	3032	3089	3150	3213	3270
2051	2130	2215	2275	2381	3033	3090	3151	3214	3271
2052	2131	2216	2276	2382	3034	3091	3152	3215	3272
2053	2132	2217	2277	2383	3035	3092	3153	3216	3273
2054	2133	2218	2278	2384	3036	3093	3154	3217	3274
2055	2134	2219	2279	2385	3037	3094	3155	3218	3275
2056	2135	2220	2280	2386	3038	3095	3156	3219	3276
2057	2136	2221	2281	2387	3039	3096	3157	3220	3277
2058	2137	2222	2282	2388	3040	3097	3158	3221	3278
2059	2138	2223	2283	2389	3041	3098	3159	3222	
2060	2139	2224	2284	2390	3042	3099	3160	3223	
2061	2140	2225	2285	2391	3043	3100	3161	3224	
2062	2141	2226	2286	2392	3044	3101	3162	3225	
2063	2142	2227	2287	2393	3045	3102	3163	3226	
2064	2143	2228	2288	2394	3046	3103	3164	3227	
2065	2144	2229	2289	2395	3047	3104	3165	3228	
2066	2145	2230	2290	2396	3048	3105	3166	3229	
2067	2174	2231	2291	2397	3049	3106	3167	3230	
2068	2175	2232	2292	2398	3050	3107	3168	3231	
2069	2176	2233	2293	2399	3051	3108	3169	3232	
2070	2177	2234	2294	2400	3052	3109	3170	3233	
2071	2178	2235	2295	2401	3053	3110	3171	3234	
2072	2179	2236	2296	2402	3054	3111	3172	3235	
2073	2180	2237	2297	2403	3055	3112	3173	3236	
2074	2181	2238	2298	2404	3056	3113	3174	3237	

BAL-12.5

- a. Construction to comply with the relevant requirements within AS 3959-2009 Construction of buildings in bushfire-prone areas for BAL-12.5 (Section 5) which includes consideration of Section 3 – Construction General
- b. The NSW variation to AS 3959-2009 Construction of buildings in bushfire-prone areas as outlined within Section A3.7 of the Planning for Bushfire Protection 2006 Appendix 3 Addendum 2010 is to be applied to the construction in addition to BAL-12.5
- c. Vegetation management on these lots is to comply with an Inner Protection Area (IPA) standard as prescribed by *Planning for Bushfire Protection 2006*
- d. Landscaping within these lots are to comply with Appendix 5 of *Planning for Bushfire Protection 2006*

2007	2018	2116	2124	2167	2258	2328	2357	3205	
2008	2019	2117	2160	2168	2259	2329	3141	3205	
2009	2020	2118	2161	2169	2311	2330	3142	3206	
2010	2021	2119	2162	2170	2312	2331	3143	3207	
2011	2022	2120	2163	2171	2324	2332	3144	3208	
2015	2103	2121	2164	2172	2325	2333	3202	3209	
2016	2104	2122	2165	2173	2326	2347	3203		
2017	2115	2123	2166	2257	2327	2356	3204		

Table 2 below lists those lots that are affected by BAL-19, BAL-29 or BAL-40. The attached maps identify the lots within the context of the BALs.

Table 2: Lots affected by BAL 19, BAL-29 or BAL-40

BAL-19, BAL-29 or BAL-40

- a. This guide does not certify the BAL
- b. It is recommended a suitably qualified bushfire consultant in risk assessment is commissioned to accurately apply the BAL(s) to a dwelling on these lots

2012	2107	2112	2148	2153	2158	2337	2342	2349	2354
2013	2108	2113	2149	2154	2159	2338	2343	2350	2355
2014	2109	2114	2150	2155	2334	2339	2344	2351	2356
2105	2110	2146	2151	2156	2335	2340	2345	2352	
2106	2111	2147	2152	2157	2336	2341	2348	2353	

All enquiries can be directed to Eco Logical Australia on 02 4302 1220

Yours sincerely



David Peterson
Principal Bushfire Consultant
FPAA BPAD-A Certified Practitioner (BPD-PA-18882)



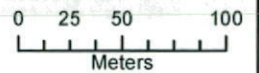
Eco Logical Australia (ELA) is recognised by the NSW Rural Fire Service and the NSW Department of Planning & Infrastructure as a suitably qualified consultant as the company is listed as a Certified Business (BPD-BA-18882) under the Fire Protection Association of Australia's BPAD program.

BALs Stage 2

Woodland
Upslope/Flat

Woodland
Upslope/Flat

Woodland
0-5 Degrees Downslope



Datum/Projection:
GDA 1994 MGA Zone 56

- Site Plan
- PBP APZ
- ▨ FZ
- ▧ BAL 40
- ▩ BAL 29
- ▨ BAL 19
- ▧ BAL 12.5
- Temporary 100m APZ

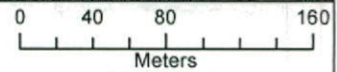
Data Sources:
Bing Aerials



BALs Stage 3



- Site Plan
- PBP APZ
- FZ
- BAL 40
- BAL 29
- BAL 19
- BAL 12.5
- Temporary 100m APZ



Datum/Projection:
GDA 1994 MGA Zone 56

Data Sources:
Bing Aerials
Lend Lease

