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Lend Lease
Project Office
Cnr Jordan Springs Blvd & Lakeside Pde
Jordan Springs NSW 2747
Attention: Ahmad Ali



Ref/Job No: 09SUTBUS-0001

30 January 2014

Dear Ahmad,

Re: Bushfire Compliance of Stages 4E, Jordan Springs

Penrith City Council provided Conditions of Consent for DA12/0897 'Staged Subdivision creating 292 Lots and Associated Civil Works'. The relevant conditions are:

3. *The proposed subdivision shall be in accordance with the provisions of the "Planning for Bushfire Protection" December 2006, and:*

- *Bushfire Protection Assessment prepared by Ecological Australia dated 24 January 2013*

4. *An Asset Protection Zone for protection from bushfire shall be provided and maintained to the subdivision approved herein in accordance with the recommendations in the Bushfire Protection Assessment prepared by Ecological Australia dated 24 January 2013.*

8. *The applicant shall at all times comply with the Bush Fire Safety Authority issued by the NSW Rural Fire Service (Ref D12/2115 DA 12092484896 KV) dated 4 December 2012 and the following conditions: (These conditions are directly taken from the NSW RFS BFSA)*

The NSW RFS BFSA (Reference No. D12/2115) requirements as they relate to Stages 4E are:

1. *Asset Protection Zones (APZs) at the issue of subdivision certificate and in perpetuity, all residential allotments within the proposed subdivision shall be managed as an inner protection area (IPA) as outlined in section 4.1.3 and Appendix 5 of 'Planning for Bush Fire Protection 2006' and the NSW Rural Fire Service document 'Standards for asset protection zones'.*
2. *Water, electricity and gas are to comply with section 4.1.3 of 'Planning for Bush Fire Protection 2006'.*
3. *Public road access shall comply with Section 4.1.3 (1) of 'Planning for Bush Fire Protection 2006'.*

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Compliance with Penrith Council Condition of Consent 3: Stage 4E has been built in accordance with the provisions of the NSW Rural Fire Service document *Planning for Bush Fire Protection 2006* and the Bushfire Protection Assessment prepared by Ecological Australia dated 24 January 2013.

Compliance with Penrith Council Condition of Consent 4 & BFSa Condition 1: The Stage 4E requirement for APZs to the southeast has been satisfied through the creation of Road 5 and to the northwest by Road 7 and a pedestrian/cycleway which is under construction and APZ setbacks to lots 4288-4293.

Compliance with Penrith Council Condition of Consent 8 & BFSa 2: Water, electricity and gas comply with section 4.1.3 of *Planning for Bush Fire Protection 2006* as demonstrated in Table 1.

Table 1: Performance criteria for services – water, electricity and gas

Performance Criteria	Acceptable Solutions	Complies
The intent may be achieved where:		
Reticulated water supplies Water supplies are easily accessible and located at regular intervals.	<ol style="list-style-type: none"> 1. Reticulated water supply to urban subdivisions uses a ring main system for areas with perimeter roads. 2. Fire hydrant spacing, sizing and pressures comply with AS 2419.1-2005. Where this cannot be met, the RFS will require a test report of the water pressure anticipated by the relevant water supply authority in such cases, the location, number and sizing of hydrants shall be determined using fire engineering principles. 3. Hydrants are not located within any road carriageway. 4. All above ground water and gas service pipes external to the building are metal, including and up to any taps. 5. The provisions of parking on public roads are met. 	<ol style="list-style-type: none"> 1. Complies 2. Certified by Sydney Water. 3. Complies 4. N/A at this stage 5. Complies
Non-reticulated water supply areas For rural-residential and rural developments (or settlements) in bushfire prone areas, a water supply reserve dedicated to firefighting purposes is installed and maintained. The supply of water can be an amalgam of minimum quantities for each lot in the subdivision (community titled subdivisions), or held individually on each lot.	<ol style="list-style-type: none"> 6. The minimum dedicated water supply required for firefighting purposes for each occupied building excluding drenching systems, is provided in accordance with table 4.2 of PBP. 7. A suitable connection for firefighting purposes is made available and located within the IPA and away from the structure. A 65 mm Storz outlet with a Gate or Ball 	6-10. N/A

Performance Criteria	Acceptable Solutions	Complies
	<p>valve is provided.</p> <p>8. Underground tanks have an access hole of 200 mm to allow tankers to refill directly from the tank. A hardened ground surface for truck access is supplied within 4 metres of the access hole.</p> <p>9. Above ground tanks are manufactured of concrete or metal and raised tanks have their stands protected. Plastic tanks are not used. Tanks on the hazard side of a building are provided with adequate shielding for the protection of fire fighters.</p> <p>10. All above ground water pipes external to the building are metal including and up to any taps. Pumps are shielded.</p>	
<p>Electricity services</p> <p>Location of electricity services limits the possibility of ignition of surrounding bushland or the fabric of buildings.</p> <p>Regular inspection of lines is undertaken to ensure they are not fouled by branches</p>	<p>11. Where practicable, electrical transmission lines are underground.</p> <p>12. Where overhead electrical transmission lines are proposed:</p> <ul style="list-style-type: none"> - Lines are installed with short pole spacings (30 metres), unless crossing gullies, gorges or riparian areas; and - No part of a tree is closer to a power line than the distance set out in accordance with the specifications in 'Vegetation Safety Clearances' issued by Ausgrid (NS179 2010). 	11. Complies 12. N/A
<p>Gas services</p> <p>Location of gas services will not lead to ignition of surrounding bushland or the fabric of buildings.</p>	<p>13. Reticulated or bottled gas is installed and maintained in accordance with AS 1596 and the requirements of relevant authorities. Metal piping is used.</p> <p>14. All fixed gas cylinders are kept clear of all flammable materials to a distance of 10 metres and shielded on the hazard side of the installation.</p> <p>15. If gas cylinders need to be kept close to the building and at least 2 metres away from any combustible material, so that they do not act as a catalyst to combustion.</p>	13-16. N/A at this stage

Performance Criteria	Acceptable Solutions	Complies
	<p>Connections to and from gas cylinders are metal.</p> <p>16. Polymer sheathed flexible gas supply lines to gas meters adjacent to buildings are not used.</p>	

Compliance with Penrith Council Condition of Consent 8 & BFS 3: The roads comply with the requirements for Section 4.1.3 (1) of *Planning for Bush Fire Protection 2006* as demonstrated in Table 2.

Table 2: Performance criteria for proposed public roads

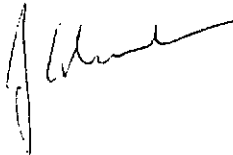
Performance Criteria	Acceptable Solutions	Complies
The intent may be achieved where:		
Firefighters are provided with safe all weather access to structures (thus allowing more efficient use of firefighting resources).	1. Public roads are two-wheel drive, all weather roads.	1. Complies
Public road widths and design that allows safe access for firefighters while residents are evacuating an area.	<p>2. Urban perimeter roads are two-way, that is, at least two traffic lane widths (carriageway 8 metres minimum kerb to kerb), allowing traffic to pass in opposite directions. Non perimeter roads comply with Table 4.1 – Road widths for Category 1 Tanker (Medium Rigid Vehicle).</p> <p>3. The perimeter road is linked to the internal road system at an interval of no greater than 500 metres in urban areas.</p> <p>4. Traffic management devices are constructed to facilitate access by emergency services vehicles.</p> <p>5. Public roads have a cross fall not exceeding 3 degrees.</p> <p>6. Public roads are through roads. Dead end roads are not recommended, but if unavoidable, dead ends are not more than 200 metres in length, incorporate a minimum 12 metres outer radius turning circle, and are clearly sign posted as a dead end and direct traffic away from the hazard.</p>	<p>2. Complies</p> <p>3. N/A</p> <p>4. Complies</p> <p>5. Complies</p> <p>6. Complies</p> <p>7. Complies</p> <p>8. Complies</p> <p>9. N/A at this stage</p>

Performance Criteria	Acceptable Solutions	Complies
	<p>7. Curves of roads (other than perimeter roads) are a minimum inner radius of six metres.</p> <p>8. Maximum grades for sealed roads do not exceed 15 degrees and an average grade of not more than 10 degrees or other gradient specified by road design standards, whichever is the lesser gradient.</p> <p>9. There is a minimum vertical clearance to a height of four metres above the road at all times.</p>	
The capacity of road surfaces and bridges is sufficient to carry fully loaded firefighting vehicles.	10. The capacity of road surfaces and bridges is sufficient to carry fully loaded firefighting vehicles (approximately 15 tonnes for areas with reticulated water, 28 tonnes or 9 tonnes per axle for all other areas). Bridges clearly indicated load rating	10. Complies
Roads that are clearly sign posted (with easy distinguishable names) and buildings / properties that are clearly numbered.	<p>11. Public roads greater than 6.5 metres wide to locate hydrants outside of parking reserves to ensure accessibility to reticulated water for fire suppression.</p> <p>12. Public roads between 6.5 metres and 8 metres wide are No Parking on one side with the services (hydrants) located on this side to ensure accessibility to reticulated water for fire suppression.</p>	<p>11. Complies</p> <p>12. Complies</p>
There is clear access to reticulated water supply.	<p>13. Public roads up to 6.5 metres wide provide parking within parking bays and located services outside of the parking bays to ensure accessibility to reticulated water for fire suppression.</p> <p>14. One way only public access roads are no less than 3.5 metres wide and provide parking within parking bays and located services outside of the parking bays to ensure accessibility to reticulated water for fire suppression.</p>	<p>13. N/A</p> <p>14. N/A</p>
Parking does not obstruct the	15. Parking bays are a minimum	15. N/A

Performance Criteria	Acceptable Solutions	Complies
minimum paved width.	<p>of 2.6 metres wide from kerb to kerb edge to road pavement. No services or hydrants are located within the parking bays.</p> <p>16. Public roads directly interfacing the bush fire hazard vegetation provide roll top kerbing to the hazard side of the road.</p>	16. N/A

In conclusion, the Penrith City Council conditions and NSW RFS GTAs in relation to the compliance of Stages 4E have been satisfied. Please don't hesitate to call me on 02 4302 1220 to discuss this matter further.

Yours sincerely,



Josh Calandra

Bushfire Planner

FPAA BPAD Certified Practitioner No. BPD-PD-23276