

ITEM 13.3 PLANNING PROPOSAL - FELTON'S LANE, HAMPDEN HALL

Contact Person: Robert Pitt – Director Sustainable Environment

File: F12/1327-01

PURPOSE

The purpose of this report is to advise that a Planning Proposal has been lodged to amend Kempsey Local Environmental Plan (KLEP) 2013 to reduce the permissible minimum lot size for a rural land parcel at Hampden Hall.

2017.143 RESOLVED

*Moved: Cl. Saul
Seconded: Cl. Shields*

That the Planning Proposal and associated documentation be submitted to the Minister for Planning for consideration of issuing a “gateway determination” pursuant to Section 56 of the *Environmental Planning and Assessment Act 1979*.

A Division resulted in the following votes.

F = Voted For

A = Voted Against

Baxter	F	Campbell	F	Hauville	F	McGinn	F	Morris	F
Patterson	F	Saul	F	Shields	F	Williams	F		

ISSUES

The Planning Proposal lodged seeks to amend the *Lot Size Map* from 40 ha to 7 ha to facilitate a future 2 lot residential subdivision of the subject land. The land is not identified within Council’s Rural Residential Land Release Strategy, nor is it within an Agreed Growth Area and urban footprint of the North Coast Regional Plan. The Planning Proposal as such is one which is referred to within the planning legislation and policy framework as a “Spot Rezoning” and is required to meet the requirements of Council’s *Procedure 1.1.16 Consideration of Planning Proposals for Land Not Identified in the Rural Residential Land Release Strategy*.

Subject Land

The subject land is legally defined as Lot 424 DP 710381, 15 Felton’s Lane, Hampden Hall. The area is located on the edge of the existing urban area of East Kempsey, on the Western side of the new Pacific Motorway (see Figure 1 below).



Figure 1: Locality and Subject land (within red border) on the edge of East Kempsey

The subject land (see Figure 2 below) has an area of approximately 21 ha, and is bisected by Old Station Road. It is this fragmentation of the holding by Old Station Road, which has led the landowner's to seek subdivision of the property into two lots. The area on the southern side of Old Station Road, contains an existing dwelling. The area on the northern side of Old Station Road is cleared and is currently used for agricultural/grazing purposes.

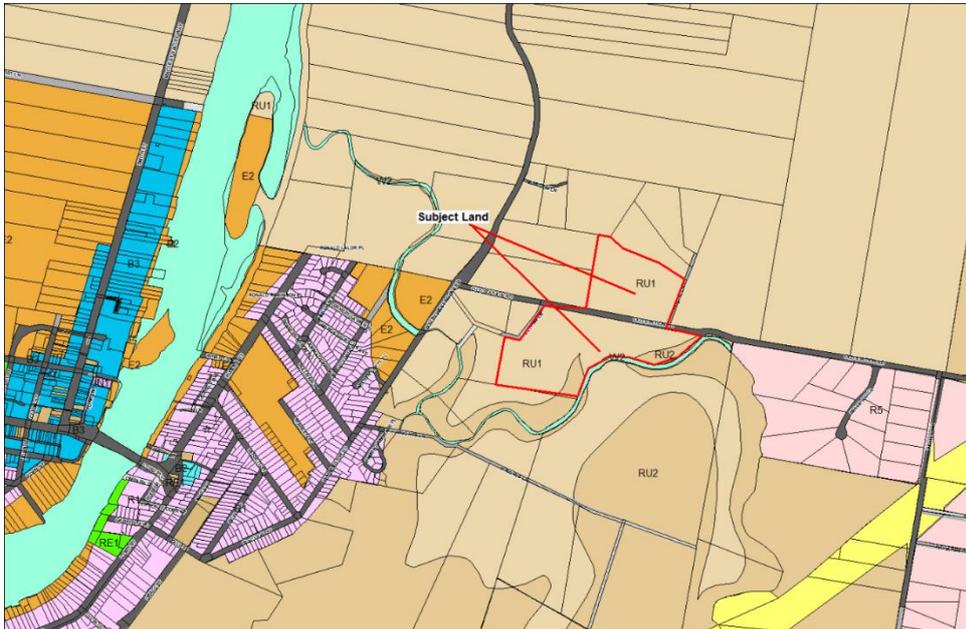


Figure 2: Existing minimum lot size mapping for the area including and surrounding the subject site (within yellow boundary)

Existing Kempsey Local Environmental Plan 2013 Provisions

The current minimum lot size applying to the subject lot and the immediately surrounding lots outside of the residential/urban are of East Kempsey is 40ha. To the east of the subject land is an area of Rural Residential land zoned R5 Large Lot Residential, with a minimum lot size of 1ha.

Objectives or intended outcomes of the Planning Proposal

The intention of the planning proposal is to:

- Amend the Lot Size Map to enable the subject land to be subdivided into two lots, with each allotment created benefiting from a dwelling entitlement.

Proposed Amendments to the Kempsey Local Environmental Plan (KLEP) 2013

It is proposed to amend the *Lot Size Map* from 40ha to 7ha for the proposed Lot 1. The proposed lot 2, which would contain the existing dwelling would remain 40ha minimum.

The resulting lot arrangement and lot areas would be as indicated in Figure 3 below.

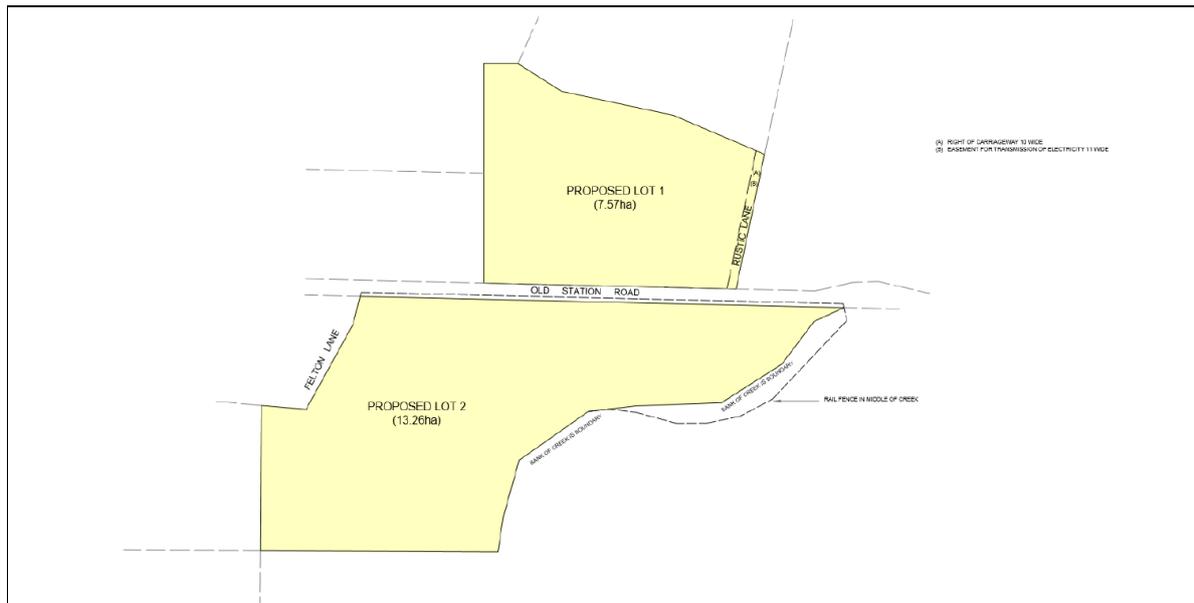


Figure 3: Proposed Lot layout and area for subdivision.

Justification for the Planning Proposal

Justification is provided in Part 3 of the submitted Planning Proposal which is annexed to this report ([Appendix D - Page 9](#)). The most relevant points of justification can be summarised as:

- 1 Rural land will not be fragmented as a result of the amendment. Old Station Road, which is a busy local road, bisecting the property has prevented the subject land being used as a whole lot. The land functions as two separate parcels currently.
- 2 The site and land area is not currently viable as farm in its own right, and the owners currently rely on work elsewhere to supplement the income. Further subdivision of the land would not result in less productive use of the land. Occupation of the northern side the land with another residence, could ensure the continued use of the land for some kind of small scale production.
- 3 The proposed new lot, has enough area to accommodate a dwelling and outbuildings such as sheds, as well as livestock or some market gardens.
- 4 The existing character of the lots adjoining Old Station Road in the immediate area already have lot sizes under 40ha.

- 5 The site is located within an area that contains other lots in the immediate area which are also under the 40ha minimum lots size, that also contain dwellings. The character of the area would not be altered by the addition of a dwelling on the proposed Lot 1.
- 6 The proposed additional lot is already serviced by an access road, being rustic lane.
- 7 The proposal complies with Council's Procedure 1.1.16 *Consideration of Planning Proposals for Land Not Identified in the Rural Residential Land Release Strategy (discussed later in this report)*.

Consistency with Relevant State Environmental Planning Policies (SEPPs)

The applicable policies and comments on the consistency of the proposal is provided in the table below:

State Environmental Planning Policy	Comments
State Environmental Planning Policy No. 14 – Coastal Wetlands	<p>The site does not contain or adjoin land containing SEPP 14 wetlands.</p> <p>It is noted that the site is captured by the draft <i>SEPP (Coastal Management) 2016</i> due to its proximity to the Macleay River. The site is contained within Coastal Use Area Map The proposal is considered to be in accordance with these draft provisions as the proposal is unlikely to result in an 'adverse' impact on Aboriginal cultural heritage or water quality, and proposed development is considered suitable in terms of bulk and scale for the locality.</p>
State Environmental Planning Policy No. 44 – Koala Habitat	<p>The site is not identified as containing Core Koala habitat under Council's Comprehensive Koala Plan of Management (CKPOM). The site is mapped in the CKPOM as unknown vegetation. The land is cleared and there are no trees on the subject land. The proposal is consistent with the provisions of the CKPOM.</p>
State Environmental Planning Policy No. 55 – Remediation of Land	<p>The site has been used for agricultural purposes. The landowners have not advised anything which indicates potential contamination, and Council records do not indicate any past uses or issues that indicates potentially contaminated land.</p> <p>The proposal is consistent with the provisions of SEPP 55.</p>
State Environmental Planning Policy (Rural Lands) 2008	<p>The Planning Proposal addresses the Rural Planning and Subdivision Principles from Cl 7 and 8 of the SEPP listed under this instrument in detail. The Proposal is generally consistent</p>

State Environmental Planning Policy	Comments
	with the rural planning principles, with the exception that the land is not consistent with local and regional strategies. These inconsistencies are discussed later in this report.
State Environmental Planning Policy (Infrastructure) 2007	The site will access onto Rustic Lane which adjoins Old Station Road which is a local road. The referral provisions of this SEPP are not triggered by the planning proposal.

Consistency with Section 117 Ministerial Directions

The proposal is consistent with the following relevant Ministerial Directions.

Directives	Key Requirement	Justification
1.2 Rural Zones		
<p>The objective of this direction is to protect the agricultural production value of rural land.</p> <p>A planning proposal must:</p> <p>(a) not rezone land from a rural zone to a residential, business, industrial, village or tourist zone.</p> <p>(b) not contain provisions that will increase the permissible density of land within a rural zone (other than land within an existing town or village).</p>	<p>May be inconsistent unless:</p> <p>(a) justified by a strategy which:</p> <p>(i) gives consideration to the objectives of this direction,</p> <p>(ii) identifies the land which is the subject of the planning proposal (if the planning proposal relates to a particular site or sites), and</p> <p>(iii) is approved by the Director-General of the Department of Planning, or</p> <p>(b) justified by a study prepared in support of the planning proposal which gives consideration to the objectives of this direction, <u>or</u> is:</p> <p>(c) in accordance with the relevant Regional Strategy or Sub-Regional Strategy prepared by the Department of Planning which gives consideration to</p>	<p>The Planning Proposal is inconsistent with this direction, in that it is not included in any strategy. It is considered that by addressing Council's procedure 1.1.16 <i>Consideration of Planning Proposals for Land Not Identified in the Rural Residential Land Release Strategy</i> as well as the broad objectives of the North Coast Regional Plan, that the inconsistency is then considered to be of minor significance.</p>

Directives	Key Requirement	Justification
	the objective of this direction, or (d) is of minor significance.	
1.5 Rural Lands		
<p>The objectives of this direction are to:</p> <p>(a) protect the agricultural production value of rural land,</p> <p>(b) facilitate the orderly and economic development of rural lands for rural and related purposes.</p> <p>A planning proposal to which clauses 3(a) or 3(b) apply must be consistent with the Rural Planning Principles listed in <i>State Environmental Planning Policy (Rural Lands) 2008</i>.</p>	<p>A planning proposal may be inconsistent with the terms of this direction only if the relevant planning authority can satisfy the Department of Planning that the provisions of the planning proposal that are inconsistent are:</p> <p>(a) justified by a strategy which:</p> <p>(i) gives consideration to the objectives of this direction,</p> <p>(ii) identifies the land which is the subject of the planning proposal (if the planning proposal relates to a particular site or sites, and</p> <p>(iii) is approved by the Director-General of the Department of Planning and is in force, or</p> <p>(b) is of minor significance.</p>	<p>The site is currently zoned RU1 – Primary Production and RU2 Rural Landscape. The planning proposal seeks to amend the lot size map from 40ha to 7ha minimum lot size.</p> <p>The planning proposal is not directly consistent with this direction, as the proposal is not consistent with Council’s Rural Residential Land Release Strategy.</p> <p>The consistency of the proposal with the provisions of <i>State Environmental Planning Policy (Rural Lands) 2008</i> has been discussed in the earlier section above (<i>Consistency with Relevant State Environmental Planning Policies</i>), and it was also noted there that the proposal is not consistent with Local Strategies or with the North Coast Regional Plan.</p> <p>It is considered that by addressing Council’s procedure 1.1.16 <i>Consideration of Planning Proposals for Land Not Identified in the Rural Residential Land Release Strategy</i> as well as the broad objectives of the North Coast Regional Plan inconsistency is then considered to be of minor significance.</p>
2.3 Heritage Conservation		
<p>The objective of this direction is to conserve items, areas, objects and places of environmental heritage significance and indigenous heritage significance.</p> <p>A planning proposal must contain provisions</p>	<p>A planning proposal may be inconsistent with the terms of this direction only if the relevant planning authority can satisfy the Director-General of the Department of Planning (or an officer of the Department nominated by the Director-General) that:</p>	<p>The applicant has conducted an AHIMS search which has not revealed any sites of Aboriginal heritage. There are no records of the site containing any items of Environmental or European heritage.</p>

Directives	Key Requirement	Justification
<p>that facilitate the conservation of:</p> <p>(a) items, places, buildings, works, relics, moveable objects or precincts of environmental heritage significance to an area, in relation to the historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic value of the item, area, object or place, identified in a study of the environmental heritage of the area,</p> <p>(b) Aboriginal objects or Aboriginal places that are protected under the <i>National Parks and Wildlife Act 1974</i>, and</p> <p>(c) Aboriginal areas, Aboriginal objects, Aboriginal places or landscapes identified by an Aboriginal heritage survey prepared by or on behalf of an Aboriginal Land Council, Aboriginal body or public authority and provided to the relevant planning authority, which identifies the area, object, place or landscape as being of heritage significance to Aboriginal culture and people.</p>	<p>(a) the environmental or indigenous heritage significance of the item, area, object or place is conserved by existing or draft environmental planning instruments, legislation, or regulations that apply to the land, or</p> <p>(b) the provisions of the planning proposal that are inconsistent are of minor significance</p>	
<p>4.1 Acid Sulphate Soils</p>		

Directives	Key Requirement	Justification
<p>The objective of this direction is to avoid significant adverse environmental impacts from the use of land that has a probability of containing acid sulphate soils.</p>	<p>A relevant planning authority must not prepare a planning proposal that proposes an intensification of land uses on land identified as having a probability of containing acid sulphate soils unless the relevant planning authority has considered an acid sulphate soils study assessing the appropriateness of the change of land use given the presence of acid sulphate soils.</p>	<p>The subject land contains Class 5, Class 4 and Class 3 Acid Sulfate Soil. The area of the new proposed lot where any dwelling would be erected is Class 5 with Class 4 adjoining.</p> <p>In accordance with this directive, the Planning Proposal will need to provide an acid sulphate soil testing report. The proposal is considered to be of 'minor significance' as the extent of development is restricted to the elevated portion of the site. A wastewater report done for the site indicates that there is ample room for the site to accommodate a treatment systems and disposal of wastewater without impacting upon the draining of the adjoining Class 4 land.</p> <p>Further assessment of this issue could occur should Gateway be granted or at Development Assessment Stage.</p>

4.3 Flood Prone Land

<p>The objectives of this direction are:</p> <p>(a) to ensure that development of flood prone land is consistent with the NSW Government's <i>Flood Prone Land Policy</i> and the principles of the <i>Floodplain Development Manual 2005</i>, and</p> <p>(b) to ensure that the provisions of an LEP on flood prone land is commensurate with flood hazard and includes consideration of the potential flood impacts both on and off the subject land.</p> <p>(4) A planning proposal must include provisions that give effect to and</p>	<p>A planning proposal may be inconsistent with this direction only if the relevant planning authority can satisfy the Director-General (or an officer of the Department nominated by the Director-General) that:</p> <p>(a) the planning proposal is in accordance with a floodplain risk management plan prepared in accordance with the principles and guidelines of the Floodplain Development Manual 2005, or</p> <p>(b) the provisions of the planning proposal that are inconsistent are of minor significance.</p> <p>Note: "flood planning area", "flood planning level", "flood prone land" and</p>	<p>The Planning Proposal is not consistent with this direction as the majority of the subject land is located within a flood planning area, and is also within an identified floodway in the Kempsey Flood Risk Management Plan.</p> <p>Council's latest information in the Draft Kempsey CBD Flood Study and Plan, indicates that the area is subject to the 1%AEP over the majority of the property, however, an area of approximately 1100 square meters indicated in (Appendix E - Page 107) which is above the Flood Planning Area and would be able to accommodate a dwelling.</p> <p>It is considered that the proposal is consistent with this provision as a flood free site for a dwelling is available.</p>
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Directives	Key Requirement	Justification
<p>are consistent with the NSW Flood Prone Land Policy and the principles of the Floodplain Development Manual 2005 (including the Guideline on Development Controls on Low Flood Risk Areas).</p> <p>(5) A planning proposal must not rezone land within the flood planning areas from Special Use, Special Purpose, Recreation, Rural or Environmental Protection Zones to a Residential, Business, Industrial, Special Use or Special Purpose Zone.</p>	<p>“floodway area” have the same meaning as in the <i>Floodplain Development Manual 2005</i>.</p>	
<p>4.4 Planning for Bushfire Protection</p>		
<p>The objectives of this direction are:</p> <p>(a) to protect life, property and the environment from bush fire hazards, by discouraging the establishment of incompatible land uses in bush fire prone areas, and</p> <p>(b) to encourage sound management of bush fire prone areas.</p>	<p>A planning proposal must:</p> <p>(a) have regard to <i>Planning for Bushfire Protection 2006</i>,</p> <p>(b) introduce controls that avoid placing inappropriate developments in hazardous areas, and</p> <p>(c) ensure that bushfire hazard reduction is not prohibited within the APZ.</p>	<p>The Bushfire Hazard Assessment provided has been prepared to meet the aims and objectives of the NSW Rural Fire Service’s <i>Planning for Bushfire Protection 2006</i> and Section 2 of AS 3959-2009 and includes measures to minimise the impact of bushfire.</p> <p>A full copy of the Bushfire Hazard Assessment is provided.</p> <p>The proposal is considered consistent with this direction.</p>
<p>5.10 Implementation of Regional Plans</p>		
<p>The objective of this direction is to give legal effect to the vision, land use strategy, goals, directions and actions</p>	<p>A planning proposal may be inconsistent with the terms of this direction only if the relevant planning authority can satisfy the Director-General of the Department</p>	<p>The Applicant suggests that the Planning Proposal is consistent with North Coast Regional Plan.</p> <p>The subject land contains Farmland Mapping which is indicated (Appendix F - Page 108). The area of land which</p>

Directives	Key Requirement	Justification
<p>contained in Regional Plans.</p> <p>Planning proposals must be consistent with a Regional Plan released by the Minister for Planning.</p>	<p>of Planning (or an officer of the Department nominated by the Director- General), that the extent of inconsistency with the regional strategy:</p> <p>(a) is of minor significance, and</p> <p>(b) the planning proposal achieves the overall intent of the Regional Plan and does not undermine the achievement of its vision, land use strategy, goals, directions or actions.</p>	<p>would accommodate the dwelling is outside of the mapped area.</p> <p>The variation for consideration of land subject to farmland mapping in the North Coast Strategy has been considered in the Planning Proposal and is discussed later in this report.</p> <p>The zoning of the land is not proposed to be altered. The resulting size of the additional lot will be 7ha, which is consistent with other Rural zoned lots in the area.</p> <p>The reduction of the lot size on this one parcel of land, is not considered to hinder or undermine the overall intent or threaten the achievement of any outcomes in the North Coast Plan.</p> <p>While the land is not identified in any Local Strategy, it is considered to have merit and be of a minor significance.</p>

6.1 Approval and Referral Requirements Objective

<p>The objective of this direction is to ensure that LEP provisions encourage the efficient and appropriate assessment of development.</p>	<p>A planning proposal must:</p> <p>(a) minimise the inclusion of provisions that require the concurrence, consultation or referral of development applications to a Minister or public authority, and</p> <p>(b) not contain provisions requiring concurrence, consultation or referral of a Minister or public authority unless the relevant planning authority has obtained the approval of:</p> <p>(i) the appropriate Minister or public authority, and</p> <p>(ii) the Director-General of the Department of Planning (or an officer of the Department nominated by the Director-General), prior to undertaking community</p>	<p>The planning proposal does not include any provisions that require the concurrence, consultation or referral of development applications to a Minister or public authority, other than those already required by existing Integrated Development provisions and State Environmental Planning Policies.</p>
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Directives	Key Requirement	Justification
	<p>consultation in satisfaction of section 57 of the Act, and</p> <p>(c) not identify development as designated development unless the relevant planning authority:</p> <p>(i) can satisfy the Director-General of the Department of Planning (or an officer of the Department nominated by the Director-General) that the class of development is likely to have a significant impact on the environment, and</p> <p>(ii) has obtained the approval of the Director-General of the Department of Planning (or an officer of the Department nominated by the Director-General) prior to undertaking community consultation in satisfaction of section 57 of the Act.</p>	

Consistency with the Kempsey Shire Rural Residential Land Release Strategy

The subject land is not identified in the *Kempsey Shire Rural Residential Land Release Strategy* (KRRLRS).

The Applicant has addressed Council Procedure 1.1.16 *Consideration of Planning Proposals for Land Not Identified in the Rural Residential Land Release Strategy* which applies when a variation is sought. The responses are provided in the table below.

<p>Procedure 1.1.16 - Consideration of Planning Proposals for Land Not Identified in the Rural Residential Land Release Strategy</p>

Variation Considerations	Response
<p>(a)(i) The land has direct access from a dedicated public road constructed to bitumen-sealed standard in accordance with the requirements of Kempsey DCP 2013</p>	<p>Complies: The subject lot has access from Old Station Road and Rustic Lane (Right of Way).</p> <p>Although the land adjoins Old Station Road, the most practical access to the flood free dwelling site is via Rustic Lane which is a private right of way. Council's policy is to restrict access to</p>

Variation Considerations	Response
	rights of way to three lots due to the conflicts that result from shared maintenance responsibilities. Although this is a matter to be addressed at DA stage, it would be reasonable to allow a fourth lot to gain access via the right of way being the most practical point of access.
(a)(ii) The subdivision will contribute to the social activities offered in the Shire's towns and villages	Complies: The proposed subdivision will reflect how the site functions currently, but with the ability for an extra dwelling to be constructed on the northern proposed lot. This would result in an additional family in the locality, which could contribute to the social activities in nearby Kempsey.
(b)(i) The land is within 500 metres of the nearest Council provided garbage service	Complies: The site is within the existing Council provided, garbage service area.
(b)(ii) The development will support increased expenditure on goods and services provided in Kempsey	Complies: The provision of an additional lot results in additional population, who will rely upon goods and services in the nearby Kempsey CBD.
(b)(iii) The development may be carried out in an economically viable manner through reduced costs of clearing, roads and other required infrastructure	Complies: The site lends itself to subdivision without the need for any clearing, works or new infrastructure.
(c)(i) The land is not within 500 metres of any permanent creeks, rivers or wetlands or suitable means to prevent the discharge of nutrients into any watercourse cannot be demonstrated	Complies: A creek flows through the southern portion of the site and further to the west, measures can be implemented to prevent discharge of nutrients. It is considered that there will be less of an environmental impact from rural-residential on the tow proposed lots that the on-going rural use of the land.
(c)(ii) The land is not located in a visually prominent location	Complies – the site is located in a rural-residential setting, is not significantly elevated or visually prominent from key locations.
(c)(iii) The land contains less than 10% tree cover as a result of the lawful removal of trees	Complies: The site is generally cleared with scattered isolated trees, substantially less than 10%. No tree removal will be required for any development to the site.
(c)(iv) The proposed subdivision is consistent with the existing pattern of development in the locality	Complies: The surrounding area demonstrates that it comprises a mixture of lot sizes and shapes, most well below the minimum lots size requirements. There is a pattern of varying sizes and shapes and the desired two lots

Variation Considerations	Response
	subdivision, which is dictated by the road location through the centre, is in keeping with the subdivision nature of the area.
(c)(v) No clearing of any Core, Primary, Class A or Class B Koala habitat identified by the Kempsey Comprehensive Koala Plan of Management is likely to result from the development	Complies: No clearing is required.
(d)(i) The land is not within or adjacent to any residential or industrial land release areas	Complies.
(d)(ii) The land is not within 1,000 metres of any potentially conflicting industrial, recreational, commercial or intensive agricultural land use or within 100 metres of any land use buffer specified by Kempsey DCP 2013	Complies.
(d)(iii) The land does not require construction of any new access point to the Pacific Highway	Complies.
(d)(iv) The land is not zoned RU4 under KLEP 2013	Complies. The land is zoned RU1 and RU2 in KLEP 2013.

Urban Growth Area Variation

The North Coast Plan 2036 contains Urban Growth Area Variation Principles. The Applicant has addressed these criteria in the Planning Proposal, and the responses are summarised in the table below.

Urban Growth Area Variation Criteria

Interim Variation Criteria	Response
Policy: The variation needs to be consistent with the objectives of the outcomes in the North Coast Regional Plan (NCRP) 2036 and may relevant Section 117 Directions and State Environmental Planning Policies, and should consider the intent of any applicable local growth management strategy.	Meets Criteria: Whilst the site is not identified with the NCRP 2036, the regional goals to maintain a stunning environment, a thriving, interconnected economy, vibrant and engaged communities and great housing choice and lifestyle options are considered to be met by this proposal. The site is free of unmanageable environmental constraints and will add to the diversity of potential farming opportunities available for the locality and increase the economic viability of activities in the area. An additional dwelling in proximity to a small

Interim Variation Criteria	Response
	number of other dwellings will contribute to the local semi-rural community. Compliance with SEPPS and 117s Directions are considered to be consistent or within permissible inconsistencies.
Infrastructure: - The variation needs to consider the use of committed and planned major transport, water and sewerage infrastructure, and have not cost to government. The variation should only be permitted if adequate and cost effective infrastructure can be provided to match the expected population.	Meets Criteria: No new infrastructure is required to facilitate the planning proposal.
Environment and Farmland Protection: The variation should avoid areas of high environmental or heritage values, and area mapped as important farmland, unless consistent with the interim variation criteria prior to finalising the farmland mapping review.	Meets Criteria: The site is not of high environmental value. The interim variation criteria for farmland are addressed in the table below. A Bionet search of the site did not identify any threatened species.
Land Use Conflict: The variation must be appropriately separated from incompatible land uses, including agricultural activities, sewerage treatment plants, waste facilities and productive resource lands.	Meets Criteria: The site is surrounded by a range of lot sizes and dwellings, and no incompatible land uses adjoin the site.
Avoiding Risk: The variation must avoid physically constrained land identified as floodprone, bushfire prone, highly erodible, having a severe slope and having acid sulfate soils.	Does not meet Criteria: The site does have portions affected by flooding, bushfire and acid sulfate soils mapping, however these are not unmanageable constraints and a large area in the north-eastern corner of the site is available for a dwelling to be sited, as well as an area for wastewater disposal. These risks can be adequately addressed and do not preclude the planning proposal and future subdivision and dwelling house.
Heritage: The Variation must protect and manage Aboriginal and Non-Aboriginal heritage.	An AHIMS search did not reveal any Aboriginal significance. No items of Non-Aboriginal heritage area recorded on the site.

Regionally Significant Farmland Mapping Variation

The provisions of the *North Coast Regional Plan 2036* provides Council with interim variation criteria for this matter. The Applicant has addressed these in the Planning Proposal and the responses are summarised in the table below.

State and Regionally Significant Farmland Interim Variation Criteria

Interim Variation Criteria	Response
Agricultural Capability: the land is isolated from other important farmland and is not capable of supporting sustainable agricultural production	Meets Criteria: The placement of the busy road through the centre of the site has created two portions of land, with the northern part not being capable of supporting sustainable agricultural production in its current form and issues associated with moving cattle across the road. The ability to operate as two components will allow for the opportunity for a dwelling on the northern portion and small scale agricultural or rural activities to continue or expand.
Land Use Conflict: the land use does not increase the likelihood of conflict and does not impact on current or future agricultural activities in the locality	Meets Criteria: The northern portion of the site is adjoined by small rural smalls. Any swelling would be located in proximity of the adjoining dwelling due to flooding issues and the remainder of the land would be able to continue for agricultural activity, away from the neighbouring dwellings.
Infrastructure: the provision of infrastructure (utilities, transport, open space, communications and stormwater) required to service the land is physically and economically feasible at no cost to State and Local Government. Adverse impacts on adjoining farmland must be avoided	Meets Criteria: All services are available to both portions of the land and no further road upgrade is required. Water is not required to rural properties, however it is available from Rustic Lane and nay upgrade of pipes would be addressed with a development application.
Environment and Heritage: the proposed land uses do not have an adverse impact on areas of high environmental value, and Aboriginal or historic heritage significance; and	Meets Criteria: Searches have revealed that the site does not have heritage significance and it's highly disturbed cleared site reinforces the lack of environmental value.
Avoiding Risk: risks associated with physically constrained land are avoided and identified, including: flood prone; bushfire prone; highly erodible; severe slope; and acid sulfate soils	Meets Criteria: The likely hazards identified for the site including flooding, bushfire and acid sulfate soils have been considered and do not prevent accommodation of a dwelling with associated wastewater disposal, clear of these hazards.

It is noted that the responses for both of the above variation criteria have been provided by the Applicant, and apart from some minor corrections have been put in the Applicant's words.

Flora and Fauna Impacts

The applicant has submitted a Bionet search, however has not provided a direct assessment or discussion of that search in the Planning Proposal. The search did not reveal any threatened species records from the site. Given the cleared and disturbed nature of the site it is considered that

Proposal would not result in any negative impacts on flora and fauna. Should Council resolve to seek a Gateway Determination, the Planning Proposal will need to be updated to include such an assessment.

Economic and Social Impacts

The planning proposal will result in positive economic and social benefits – through the provision of additional local housing stock, the sustained growth of the Euroka/Kempsey area and the provision of further rural-residential housing stock opportunity in close proximity of Kempsey.

Public Infrastructure

The site has access via sealed Old Station Road, and Rustic Lane. Old Station Road is subject to 1% AEP and access to Kempsey would be prevented in a 1% event. The proposed lot would have access to other services, with the exception of sewer.

Community and Public Agency Consultation

Consultation will be undertaken with the State and Commonwealth authorities should the Director General determine to allow the planning proposal to proceed as part of the overall public exhibition and consultation for the planning proposal post Gateway Determination.

Community Consultation is proposed to be undertaken in accordance with any conditions specified in the Gateway Determination and Kempsey Shire Council's Rezoning Policy and Procedure 1.1.9, Section 3 Public Notification and Consultation.

Conclusion on Merit of the Planning Proposal

Notwithstanding that the creation of an additional lot at this specific locality was not included in a Local Growth Management Strategy, it is considered that the Planning Proposal has merit, and is unlikely to result in any negative outcomes. The Planning Proposal can address the relevant SEPPS, 117 Directions and variation criteria from various strategies.

It is considered that the issues related to flooding may present the most barriers to progress, with the final decision resting with the Department of Planning. It is considered that the broad compliance with most requirements, that the merits of the proposal have demonstrated. Therefore it is considered worth pursuing a Gateway Determination to proceed to the make the plan.

The Planning Proposal will need to be rewritten and updated prior to public exhibition, should a positive Gateway Determine be issued. The intention of the Planning Proposal to amend the Lot Size Map will remain the same.



Planning Proposal

Amendment to Minimum Lot Size Map

Lot 424 DP 710381

15 Feltons Lane, Hampden Hall

April 2017 – Rev A



LandDynamics
AUSTRALIA

Prepared for:

Robert & Donna Wicks

Prepared By:

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	Name	Date
Prepared By	Donna Clarke	27/04/2017 – Rev A
Checked By		

Disclaimer

This report was prepared in accordance with the scope of works set out in correspondence between the client and Land Dynamics Australia.

To the best of Land Dynamics Australia's knowledge, the report presented herein accurately reflects the Client's intentions when the report was printed. However, it is recognised that conditions of approval at time of consent, post development application modification of the proposals design, and the influence of unanticipated future events may modify the outcomes described in this report.

Land Dynamics Australia used information and documentation provided by external persons, companies and authority. Whilst checks were completed by Land Dynamics Australia to ensure that this information and/or documentation was accurate, it has been taken on good faith and has not been independently verified. It is therefore advised that all information and conclusions presented in this report apply to the subject land at the time of assessment, and the subject proposal only.

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Executive Summary

The purpose of this Planning Proposal is to amend the minimum lot size map of Kempsey Local Environmental Plan 2013 with respect to the identified portion of land at Lot 424 DP 710381, 15 Feltons Lane, Hampden Hall to allow for a future two lot subdivision to occur.

The subject land is zoned predominantly RU1 Primary Production under Kempsey LEP 2013 which permits subdivision on the site. A small slither of land along the south-west boundary of the southern portion of the site is zoned RU2 Rural Landscape and Zone W2 Recreational Waterways.

Subdivision of the site is permitted under Clause 2.6 of the LEP. However, a variation to the minimum allotment size is required and the LEP does not permit a variation to the portion zoned RU1. Accordingly, a Planning Proposal is being pursued to facilitate a two lot subdivision of the site by way of a map amendment specific to this site only. It is important to note that a rezoning and associated change to the landuse of the site is not proposed and the two parcels of land can continue for rural purposes, in a similar manner to the way in which it functions currently due to the road.

Discussions have been held with Council and the Department of Planning prior to lodgement of the Planning Proposal. The proposed change to the minimum lot size map relating to the subject site reflects the existing manner in which the site operates due to a road traversing, as well as the constraints on the site and the surrounding land uses and provides a balance between social, economic and ecological values.

The site is currently transected by Old Station Road which results in two parcels either side of a road on one title. There are no changes on the ground required for any future subdivision as services already exist to each future parcel, as well as vehicular access. The site is unable to be successfully utilised for primary production due to the size and road transecting which restricts livestock movements and therefore the proposed subdivision cannot be viewed as a fragmentation of farmland.

An investigation of environmental and design considerations illustrates that the site is suitable for a subdivision into two. No unmanageable issues were identified in relation to transport, visual and acoustic privacy, heritage, acid sulfate soils, flooding, bushfire, flora and fauna or the provision of utilities. The development is proposed on a disturbed site, in an existing rural area which functions in a rural-residential capacity. The Planning Proposal is consistent with Regional Strategies and S.117 Directions.

Kempsey Shire Council is urged to support this Planning Proposal and forward the proposal to the Department of Planning for Gateway determination.

1. Part 1 – Objectives or Intended Outcomes Site Analysis

To enable the subject land to be subdivided into two lots, with each allotment being below the minimum lot size.

The site and surrounds are identified in the location plan and aerial photograph in Figures 1 - 3 below.

The purpose of the Planning Proposal is to allow the unconstrained portion of the northern part of the site to be a separate allotment and to accommodate a dwelling. Accordingly, this Planning Proposal is seeking to allow a minimum allotment size below that of the LEP, for this particular site only.

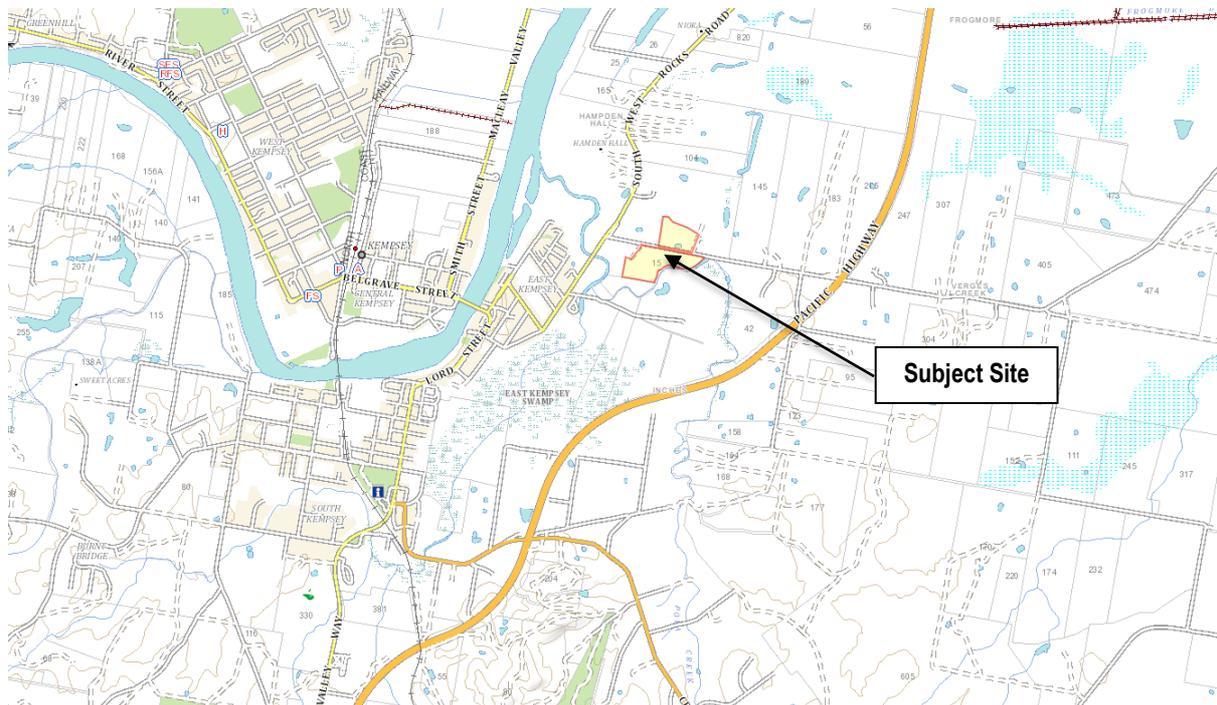


Figure 1 – Location Plan (source: www.sixmaps.nsw.gov.au)

The southern portion of the site contains an existing dwelling and sheds, which is accessed from Feltons Lane.

The northern portion of the site contains a right-of-carriageway along the eastern boundary (known as Rustic Lane) which provides access to the small allotments to the north, approved by DA875/84, as shown on the Deposited Plans below.



Figure 2: Site Plan (source: www.sixmaps.nsw.gov.au)



Figure 3: Aerial Photograph (source: www.sixmaps.nsw.gov.au)

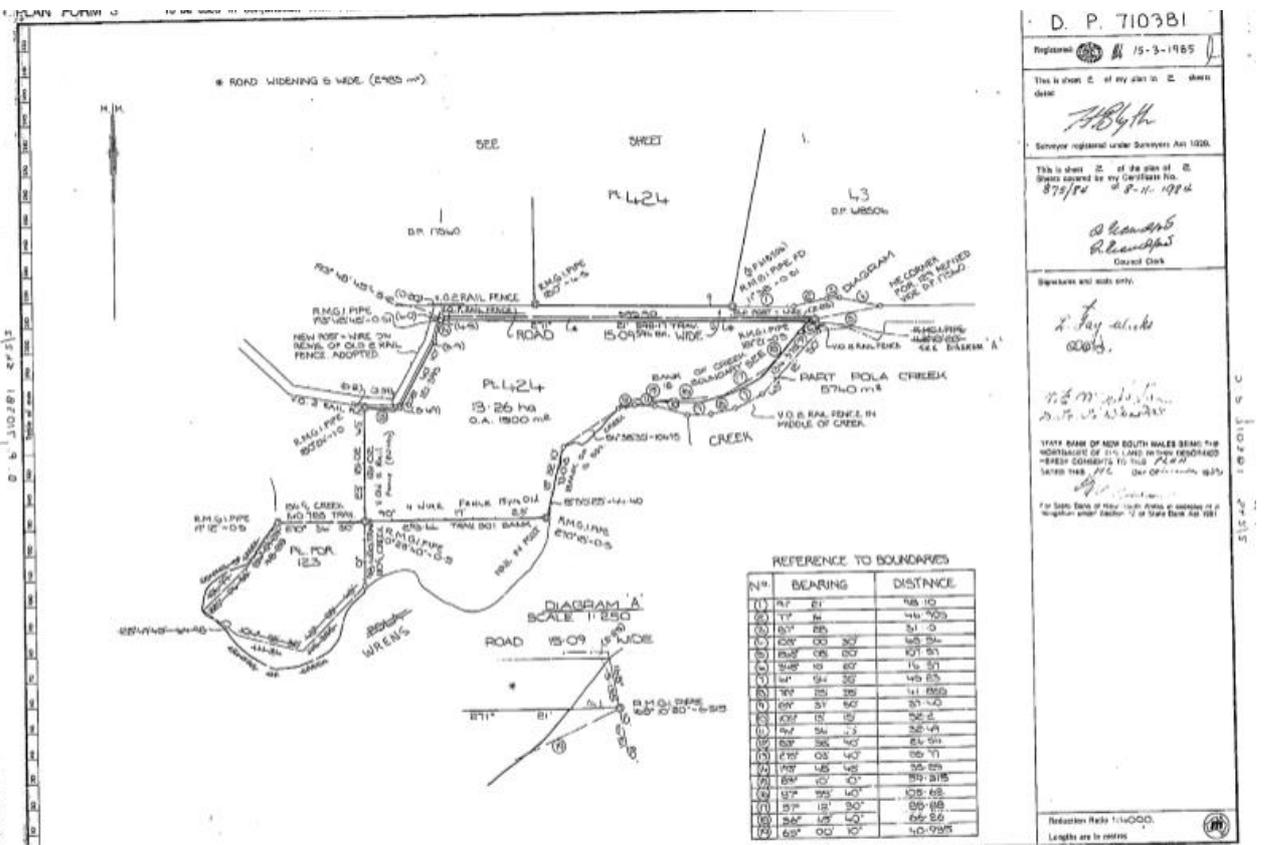
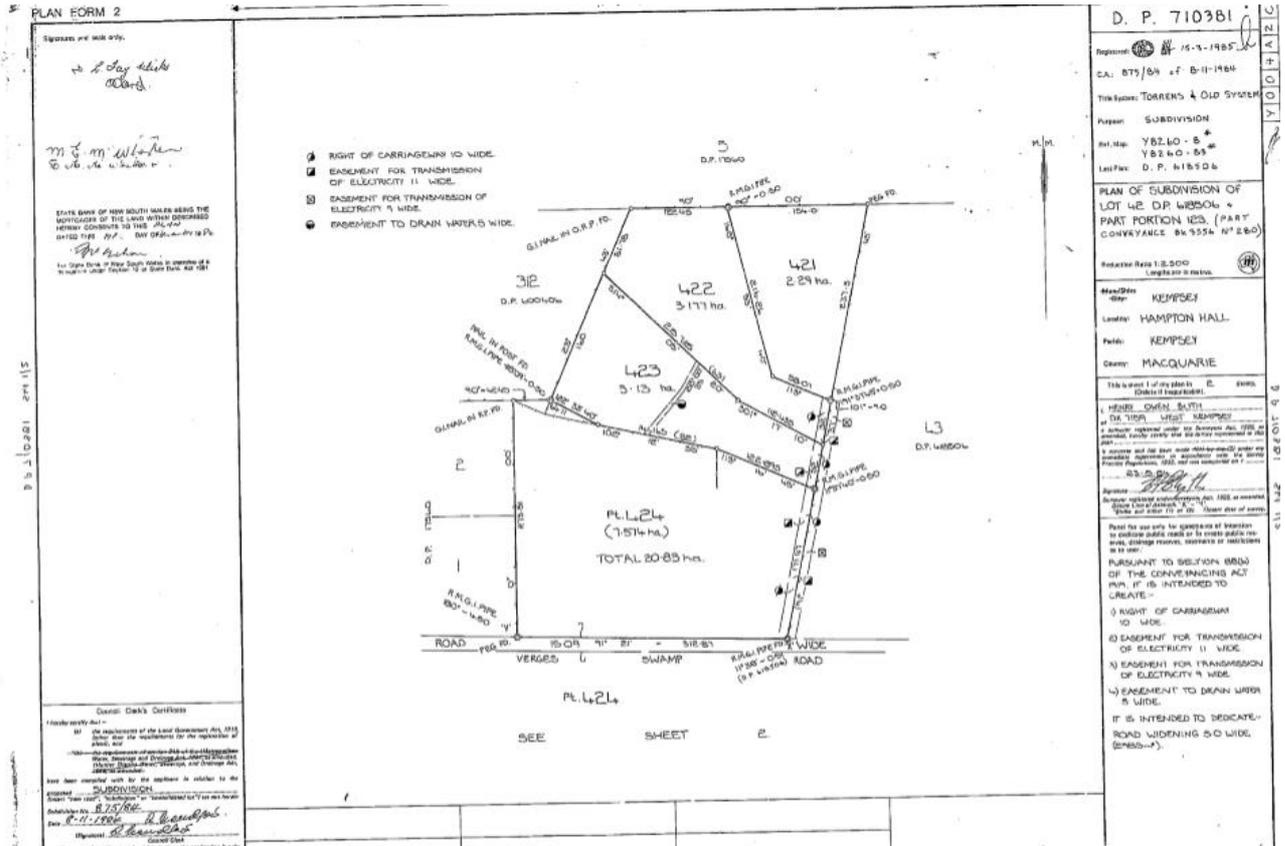


Figure 4: Deposited Plan

2 Part 2 - Explanation of Provisions

The proposed outcome will be achieved by:

- Amending Kempsey Local Environmental Plan 2013 Minimum Lot Size Map on the identified portion of Lot 424 DP 710381, 15 Feltons Lane, Hampden Hall to allow a minimum lot size of 7ha.

Existing situation

Under Council's principle planning instrument, Kempsey Local Environmental Plan 2013, the subject site (Lot 424 DP 710381, 15 Feltons Lane, Hampden Hall) is zoned primarily RU1 Primary Production. A small slither of land along the south-east boundary is zoned RU2 Rural Landscape and Zone W2 Recreational Waterways. Refer to Figure 5 below.

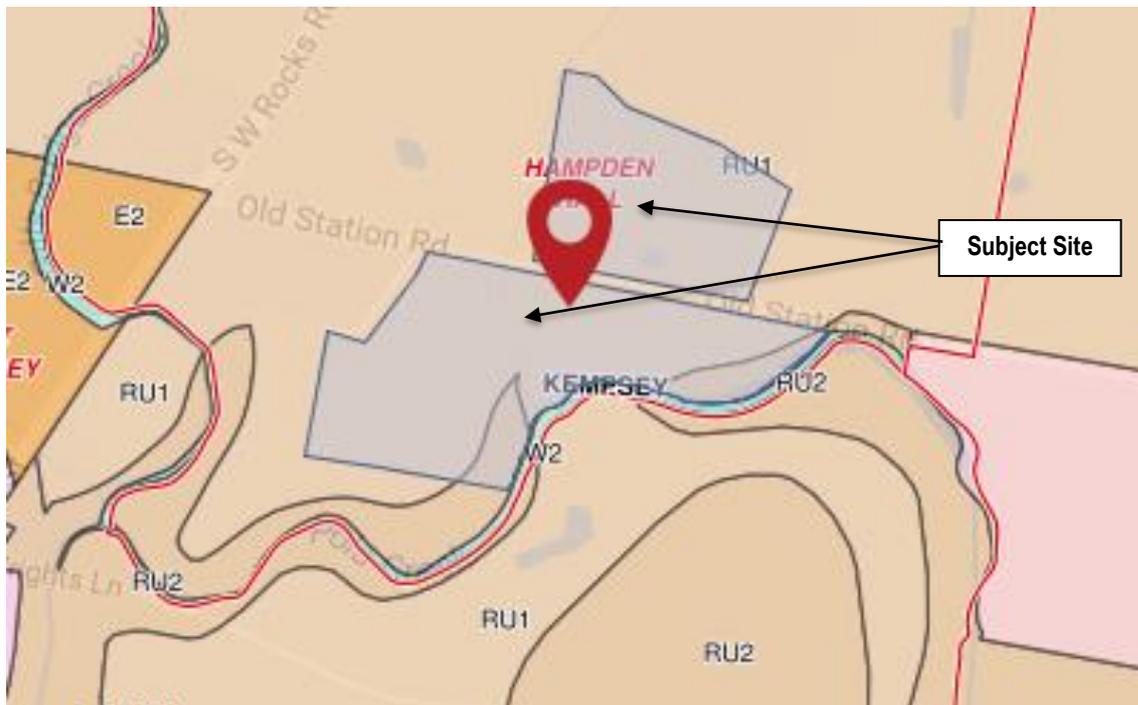


Figure 5 – PMHC LEP Zoning map extract (source: www.planningportal.nsw.gov.au)

The minimum lot size for the subject land is identified in Kempsey LEP 2013 as 40ha for RU1. There is no change proposed to the minimum lot size for the RU2 and W2 portions of the site and no application will be forthcoming to alter the area of land within those zones. The site is surrounded by a variety of lot sizes, most smaller than either of the two proposed lots and all in this area well below the 40ha minimum for the RU1 zone.

The maps accompanying the current LEP also identify the site as being affected by acid sulphate soils (Class 4 & 5).

Council does not have LEP flooding maps. However, Clause 7.3 requires consideration of flooding and Council's rudimentary flood mapping, as well as the draft mapping currently on exhibition, have been addressed in Section 3.8 below.

Proposed changes

It is requested that a 7ha minimum lot size be imposed which would allow subdivision of the lots into two, as per the existing situation with the road through the centre being the new boundaries. The site is located amongst a variety of different lot sizes, most below the requested 7ha.

Below in Figure 6 is a likely plan of subdivision into two allotments, which reflects the existing road position.

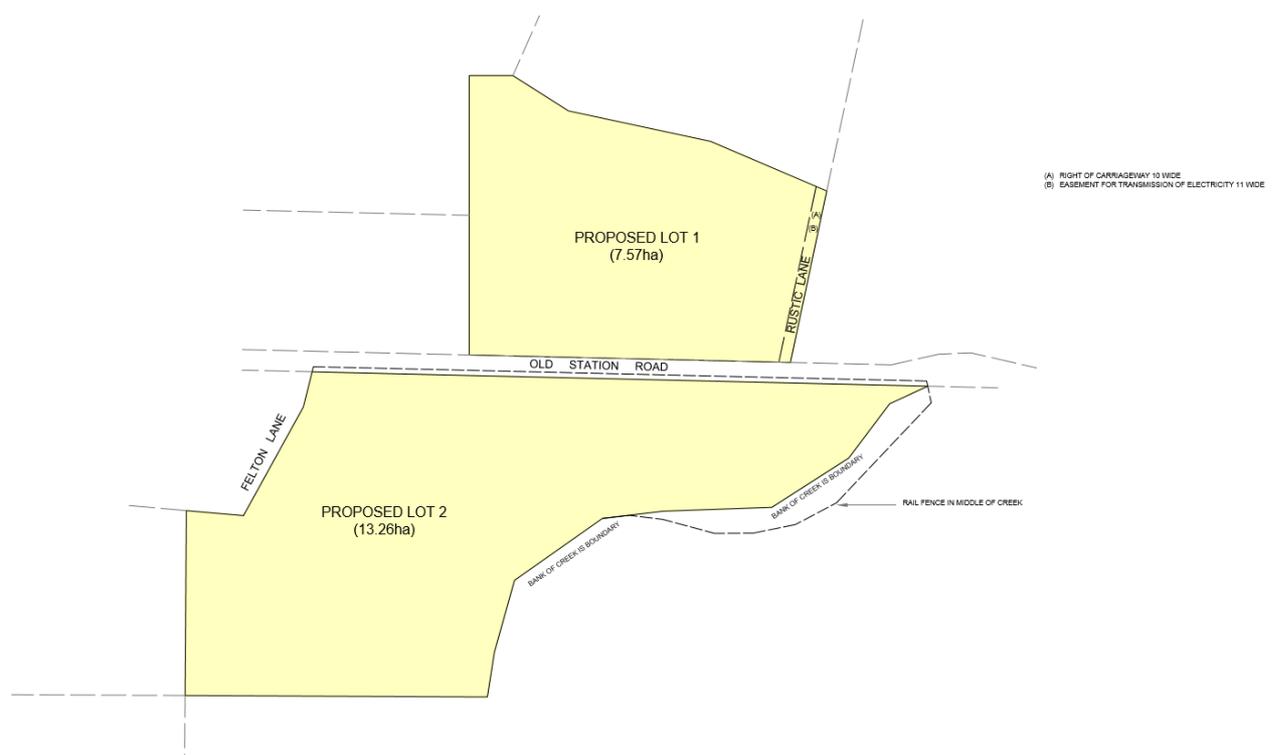


Figure 6 – Draft Plan of Subdivision into Two

There is ample room on the indicated Proposed Lot 1 to accommodate a dwelling in an area which is not flood affected and access would be via the existing right-of-carriageway. Investigation has also revealed that there is ample room for on site sewerage management treatment and disposal. Council has advised that the site is not required to be connected to a water main, however if desired the main in Rustic Lane could be upgraded as part of a development application.

3 Part 3 – Justification

The site is currently used for semi-rural agricultural purposes, however due to the presence of the road and size of the lot, the land is not viable for primary agricultural purposes, but rather at a small or hobby scale. The northern portion of the site is clear of structures and the southern portion contains a dwelling and shed.

As can be seen in Figures 1-3, the site is surrounded by a variety of lot sizes, most smaller than either of the proposed lots and all in this area well below the 40ha minimum for the zone.

The reasons to support this request are:

- Rural land is not being fragmented as the site already operates as two separate parcels with an upgraded busy road separating.
- The site as a whole is not viable as a farm in its own right, relying on the owners to work elsewhere to supplement the income. As such, the site is ideal for further subdivision as it will not result in loss of prime agricultural land, but rather allow small scale activities to continue on both allotments and a safer and more logical use of the land.
- The lots have been laid out in a practical manner as a result of the existing road position. Each allotment is capable of accommodating a dwelling and outbuildings such as sheds, as well as livestock or room for other agricultural activities, outside of any flooding or bushfire identified areas.
- The immediate area features a range of lot sizes which are characteristic of a rural residential locality. The intended future subdivision will create lots which are comparable with lot sizes of neighbouring parcels which are considerably smaller in size, and would be suitable for a range of hobby farming activities. The contrasting lot sizes of the two future parcels adds to the diversity of potential farming opportunities available for the locality.
- The site is located within an established rural residential area with many small sized allotments. The future development of two allotments would not affect the amenity of surrounding land uses. Moreover, the size of the intended lots would permit a greater diversity of intensive rural pursuits on the land including those which don't demand an area of 40ha.

- The subdivision type is comparable with the rural residential environment it forms part of and would not have any adverse impact on the amenity of neighbouring rural residential properties.
- The northern portion of the site is already a sustainable stand-alone parcel in that it is serviced and has its own vehicular access via Rustic Lane (on this lot on title) and is capable of accommodating a dwelling and associated OSSM and agricultural activities.
- The parent parcel is substantially larger than all neighbouring lots in this locality.
- The area is an established and well serviced rural residential location. Demand for small-lot acreage from both Kempsey and the LGA is high, hence the identification of this land for investigation and a reduced lot size to meet that demand.
- The future two lot subdivision is essential for the ongoing management of the subject land.
- No removal of existing vegetation is proposed or necessary in order to facilitate the future subdivision.
- Given that the parent parcel is relatively large and unique in the locality, the proposal would not create an undesirable precedent in the area.
- The proposal is comparable with surrounding lot sizes as illustrated in the draft plan of subdivision above.
- The proposed subdivision would offer increased overall viability of the parcel by improving manageability of the land.
- Each of the proposed lots has access to permanent water supply and services.
- The intent of the development standard in this location is to protect the potential for small-lot intensive farming and associated rural activities. The variety of lot sizes proposed will encourage the utilisation of the parcels' future agricultural potential and add to the diversity of housing choice and small-lot farming options.

- The intended likely subdivision will create lots which are comparable with lot sizes of neighbouring parcels, and would contribute to a diversity of parcel size, which would be suitable for a range of hobby farming activities.
- The property has unsuccessfully been on the market for sale 9 years ago and again 6 months ago, with the feedback indicating that a lot with a busy road, which is getting even busier, through the middle is undesirable.
- The change to minimum lot size will not result in any adverse environmental, social or economic impacts. The proposal is comparable with surrounding lot sizes and does not alter the way the lots appear on the ground or create a visual impact. The uniqueness of the road carriageway through the site creates independent parcels and therefore ensures that the future two lot subdivision proposal would not create an unwanted precedent in the area.
- The approval of the development would allow the agricultural use to continue, which is currently unviable due to the road dissecting the site. A safer outcome is achieved and the subdivision would not be identifiable from the public domain as the site already appears as two entities.
- There will be positive social and economic benefits from the proposed rezoning, by way of additional housing stock.
- The proposed rezoning is a logical extension of the existing residential, providing orderly development and a supply of needed residential land.

Section A - Need for the Planning Proposal

3.1 Is the Planning Proposal a result of any strategic study or report?

The site is not identified for future residential development in any regional strategies or Council's Rural-Residential Land Release Strategy. Notwithstanding this, a re-zoning is not requested and *Procedure 1.1.16 Consideration of Planning Proposals for Land Not Identified in the Rural Residential Land Release Strategy* exists and is relevant to this site. The Procedure has been reviewed and it is noted that there is the ability for the subject site to be considered for rural-residential subdivision. Compliance with the requirements of Part 3 of the Procedure have been demonstrated, with each point stated and a comment addressing that point below.

a) Social Criteria

i) The land has direct access from a dedicated public road constructed to bitumen-sealed standard in accordance with the requirements of Kempsey DCP 2013.

Comment:

Yes – The formed road known as Old Station Road transects the site through the centre.

ii) The subdivision will contribute to the social activities offered in the Shire's towns and villages.

Comment:

Yes - The proposed subdivision will reflect how the site functions currently, but with the ability for an extra dwelling to be constructed on the northern proposed lot. This would result in an additional family in the locality, which could contribute to the social activities in nearby Kempsey.

b) Economic Criteria

i) The land is within 500 metres of the nearest Council provided garbage service.

Comment:

Yes - Garbage services exist along Old Station Rd and service both proposed lots.

ii) The development will support increased expenditure on goods and services provided in Kempsey.

Comment:

Yes – The provision of an additional lot results in addition population, who will rely upon goods and services in the nearby Kempsey.

iii) The development may be carried out in an economically viable manner through reduced costs of clearing, roads and other required infrastructure.

Comment:

Yes – The site lends itself to subdivision without the need for any clearing, works or new infrastructure.

There is no need for any new roads to facilitate the proposed subdivision and ample frontage is provided to the existing main road which was recently upgraded, utilising existing access points. No change to road frontage or vehicular access is proposed from existing.

A right of carriageway exists along eastern portion of northern lot (known as Rustic Lane) and this will be continued to be utilised for access to the northern proposed lot.

Telephone and electricity are already provided to each proposed allotment.

c) Environmental Criteria

i) The land is not within 500 metres of any permanent creeks, rivers or wetlands or suitable means to prevent the discharge of nutrients into any watercourse cannot be demonstrated.

Comment:

Yes – Whilst a creek flows through the southern portion of the site and further to the west (as shown in Figure 2), measures can be implemented to prevent discharge of nutrients. It is considered that there will be less of an environmental impact from rural-residential on the two proposed lots than the on-going rural use of the land.

ii) The land is not located in a visually prominent location.

Comment:

No – The site is located within a rural-residential setting, is not significantly elevated or visually prominent from key locations.

iii) The land contains less than 10% tree cover as a result of the lawful removal of trees.

Comment:

No – The aerial photograph in Figure 3 demonstrates that the site is generally cleared with scattered isolated trees, substantially less than 10%.

iv) The proposed subdivision is consistent with the existing pattern of development in the locality.

Comment:

Yes – Figures 1 and 2 above showing the immediate and further surrounding area demonstrates that it comprises a mixture of lot sizes and shapes, most well below the minimum lot size requirements. There is a pattern of varying sizes and shapes and the desired two lot subdivision, which is dictated by the road location through the centre, is in keeping with the subdivision nature of the area.

v) No clearing of any Core, Primary, Class A or Class B Koala habitat identified by the Kempsey Comprehensive Koala Plan of Management is likely to result from the development.

Comment:

No – No clearing is required.

d) Governance

i) The land is not within or adjacent to any residential or industrial land release areas.

Comment:

No – Land further to the east is residentially zoned and identified for further growth, however it does not adjoin the site.

ii) The land is not within 1,000 metres of any potentially conflicting industrial, recreational, commercial or intensive agricultural land use or within 100 metres of any land use buffer specified by Kempsey DCP 2013.

Comment:

No.

iii) The land does not require construction of any new access point to the Pacific Highway.

Comment:

No.

iv) The land is not zoned RU4 under KLEP 2013.

Comment:

No - The subject land is zoned predominantly RU1 Primary Production under Kempsey LEP 2013 which permits subdivision on the site. A small slither of land along the south-west boundary is zoned RU2 Rural Landscape and Zone W2 Recreational Waterways.

Accordingly, there is opportunity to consider this Planning Proposal to alter the minimum allotment size on this site only.

3.2 Is the Planning Proposal the best means of achieving the objectives or intended outcomes, or is there a better way?

The Planning Proposal is the only legal method of amending Kempsey LEP 2013 to permit development applications to be submitted, considered and determined for subdivision into two and construction of a dwelling on the northern portion.

Section B - Relationship to strategic planning framework

3.3 Is the Planning Proposal consistent with the objectives and actions contained within Regional Strategies?

The Mid North Coast Regional Strategy 2006- 31 identifies that the greatest population growth pressure will be experienced around Coffs Harbour, Port Macquarie and Great Lakes/Taree. The Strategy encourages accommodation of coastal growth whilst protecting coastal values and locating within an existing main settlement. In doing so, the site is considered suitable for rural-residential purposes for the following reasons:

- The site is already serviced.
- Notwithstanding the zoning, there will be no loss of agricultural land. The site is not currently able to be easily, safely or efficiently utilised for such purpose due to the busy road, but could do so once two parcels.

- The site is cleared land.
- The site is located close proximity of South Kempsey and Kempsey, providing good services and facilities for the future residents.

Further, the *Mid North Coast Farmland Mapping Project - Final Recommendations Report 2008* identifies the site in part as regionally significant farmland, based on soil landscapes at a broad scale, not having regard to the characteristics of the site. Farmland significance identified may not necessarily be accurate at the property scale and the whole site is not affected. Rezoning of regionally significant farmland is not permitted, however, a rezoning is not sought in this instance, rather a variation to the minimum allotment size. The change to minimum lot size would allow this site to increase its farming viability and in a safe manner once two parcels. The recently adopted *North Coast Regional Plan 2036* includes specific Interim Variation Criteria to address this type of situation and Urban Growth Variation Principles, shown below and a comment provided.

Urban Growth Area Variation Principles

Policy – Whilst the site is not identified in the North Coast Regional Plan 2036, the regional goals to maintain a stunning environment, a thriving, interconnected economy, vibrant and engaged communities and great housing choice and lifestyle options are considered to be met by this proposal. The site is free of unmanageable environmental constraints and will add to the diversity of potential farming opportunities available for the locality and increase the economic viability of activities in the area. An additional dwelling in a rural-residential environment, in proximity to a small number of other dwellings will contribute to the local semi-rural community. This document addresses compliance with the SEPP's and S.117 Directions.

Infrastructure – No new infrastructure is required to facilitate the planning proposal.

Environmental and farmland protection – The site is not of high environmental value. The interim variation criteria area addressed below due to the site being identified on the rudimentary farmland mapping. A BioNet search was undertaken which did not identify threatened species.

Land use conflict – The site is surrounded by a range of lot sizes and dwellings which are characteristic of a rural residential locality. No incompatible uses adjoin the site.

Avoiding risk – The site does have portions affected by flooding, bushfire and acid sulfate soils mapping, however these are not unmanageable constraints and a large area in the north-eastern corner of the site is available for a dwelling to be sited, as well as area for wastewater disposal. These risks can be

adequately addressed and do not preclude the planning proposal and future subdivision and dwelling house.

Heritage – An AHIMS search did not reveal any heritage significance.

Coastal Area – The site is not located in the coastal area.

Important Farmland Interim Variation Criteria

The criteria identify that the land may be suitable for uses other than farmland. It is considered that the planning proposal meets these criteria, as detailed below.

Agricultural capability – The provision of a busy road through the centre of the site has created two portions of land, with the northern part not being capable of supporting sustainable agricultural production in its current form and issues associated with moving cattle across the road. The ability to operate as two components will allow for the opportunity for a dwelling on the northern portion and small scale agricultural or rural activities to continue or expand.

Land use conflict – The northern portion of the site is adjoined by small rural-residential lots. Any dwelling would be located in proximity of the adjoining dwelling due to flooding issues and the remainder of the land would be able to continue for agricultural activity, away from the neighbouring dwellings.

Infrastructure – All services are available to both portions of the land and no further road upgrade is required. Water is not required for rural properties, however is available from Rustic Lane and any upgrade of pipes would be addressed with a development application.

Environment and heritage – Searches revealed that the site does not have heritage significance and its highly disturbed cleared state reinforces the lack of environmental value.

Avoiding risk – The likely hazards identified for the site including flooding, bushfire and acid sulfate soils have been considered and do not prevent accommodation of a dwelling with associated wastewater disposal, clear of these hazards.

3.4 Is the Planning Proposal consistent with a Council's local strategy or other local strategic plan?

As discussed above, the Planning Proposal is consistent with *Procedure 1.1.16 Consideration of Planning Proposals for Land Not Identified in the Rural Residential Land Release Strategy*.

The subject site is indicated on the *Kempsey Rural Residential Land Release Strategy* maps as being in Floodplain and therefore not identified for future residential uses. The current owners of the site have owned the land for many years and experienced a number of floods. In these instances, the site has not experienced flooding as nearby properties have and in fact been used by surrounding landowners as a refuge for their livestock. The owners have cited the 2001 floods where neither of the proposed lots went underwater. The main house, sheds and arena contained within Proposed Lot 1 (southern side of the road) were all dry during these floods and was used to contain the neighbour's cattle.

The area to the east is residentially zoned and identified for further growth, which will inevitably increase the traffic on Old Station Road. This further impedes the use of both portions of the allotment together for agricultural purposes such as cattle, where they are required to be moved across the busy road. It is considered from an agricultural viewpoint, that the parcels of land on their own are not adequate in size for a viable livestock business. Therefore, the owners of the land are required to work elsewhere to supplement their income to enable continuation of agricultural activities on the land.

Accordingly, it appears that the site has been unfairly excluded from the *Kempsey Rural Residential Land Release Strategy* on the basis of rudimentary and inaccurate flood mapping and would be ideal for further subdivision. Further, this area of Hampden Hall along Old Station Road would provide a logical extension of the developing residential area to the east and to the west of East Kempsey and onto the main centre of Kempsey, without the need for loss of primary production agricultural land.

3.5 Is the Planning Proposal consistent with applicable State environmental planning policies?

In assessment against the relevant State Environmental Planning Policies (SEPP) is shown in the following table.

SEPP	Comment
No. 44 – Koala Habitat Protection	<p><i>This policy encourages the conservation and management of natural vegetation areas that provide habitat for koalas to ensure permanent free living populations will be maintained over their present range.</i></p> <p>The site is identified as being land identified as “Area Subject to Koala Management Plan” on Council’s LEP maps. The site however has been used for agricultural purposes and as can be seen from the aerial photograph that the site is cleared due to years of grazing and therefore</p>

	<p>unlikely to contain koala habitat. Therefore, the likelihood and viability of the koala habitat or population is not expected due to the absence of vegetation.</p> <p>A Koala Plan of Management would not be required for future development of the site for the purposes of SEPP 44.</p> <p>Kempsey Comprehensive Koala Plan of Management applies and the site is mapped as unknown vegetation / predominantly cleared, which reflects the on-ground situation where the site does not contain trees and is used for cattle grazing. The primary aims of the KCKPoM are “to ensure to the maximum extent possible that the extent of habitat currently being occupied by koalas is not reduced further on land to which the plan can be effectively applied”. The planning proposal is consistent with KCKPoM.</p>
<p>Rural Lands 2008</p>	<p><i>The aim of this policy is to facilitate the orderly and economic use and development of rural lands for rural and related purposes. The SEPP contains a number of “Rural Planning Principles” that must be considered in preparing any Planning Proposals affecting rural lands.</i></p> <p>The purpose of this SEPP is to prevent the loss of rural lands and maintain the rural settlements and lifestyle. The site, whilst zoned RU1, does not form part of a rural settlement or contribute to the rural lifestyle.</p> <p>The site will not be rezoned and will remain for rural purposes, however in a more appropriate form having regard to the existing road. This approach still allows for the opportunities for a rural lifestyle on both portions of the site and no fragmentation of rural land will result. There is no land use conflict envisaged as no change is proposed to the zoning. The provision of two parcels being 7ha and 13ha are in keeping with the surrounding lot sizes, which in many instances are well below that requested and as such the Planning Proposal is compatible with the surrounds.</p> <p>The Rural Planning Principles and Rural Subdivision Principles remain satisfied with rural activities continuing on the site, however in an</p>

	<p>improved format with the ability to function as two parcels and be more financially viable. The request for a change to minimum lot size is a direct result of the upgraded road through the centre, which has impacted on the agricultural use of the land and the ability to operate as one holding. There will be a positive economic benefit by both parcels being able to be operated separately for rural purposes.</p> <p>The Rural Planning Principles are addressed below:</p> <p><i>(a) the promotion and protection of opportunities for current and potential productive and sustainable economic activities in rural areas</i> – The site is cleared and suitable for rural purposes, with the ability for subdivision increasing the viability for long-term continuation of agricultural use of the land due to the road no longer being constraint.</p> <p><i>(b) recognition of the importance of rural lands and agriculture and the changing nature of agriculture and of trends, demands and issues in agriculture in the area, region or State</i> – The site will continue to be available for rural and agricultural purposes, with only a small portion likely to be developed for a dwelling house.</p> <p><i>(c) recognition of the significance of rural land uses to the State and rural communities, including the social and economic benefits of rural land use and development</i> – The planning proposal allows for rural purposes to continue and thrive, unlike the current situation with the road being a constraint for movement of cattle and the need to work off site as a means of financial assistance. There will be social and economic benefits to the two portions of the land being able to operate independently.</p> <p><i>(d) in planning for rural lands, to balance the social, economic and environmental interests of the community</i> – There are no unmanageable environmental constraints on the site and ample room available for a dwelling. There is no resulting burden on existing infrastructure or services as a result of the proposal.</p>
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	<p><i>(e) the identification and protection of natural resources, having regard to maintaining biodiversity, the protection of native vegetation, the importance of water resources and avoiding constrained land</i> – The site does not contain vegetation and has no unmanageable environmental constraints.</p> <p><i>(f) the provision of opportunities for rural lifestyle, settlement and housing that contribute to the social and economic welfare of rural communities</i> – This planning proposal creates an opportunity to provide a dwelling on the site which will enhance the economic welfare of the rural community and allow the rural use of the land to continue.</p> <p><i>(g) the consideration of impacts on services and infrastructure and appropriate location when providing for rural housing</i> – Services are available to the site. Any need for upgrading of water pipes would be addressed with a development application, notwithstanding Council has advised there is no need for the site to be connected to the water main. The existing services in Kempsey and the road network, which includes the recently upgraded Old Station Rd, can withstand one additional dwelling.</p> <p><i>(h) ensuring consistency with any applicable regional strategy of the Department of Planning or any applicable local strategy endorsed by the Director-General</i> – Whilst the site has not been identified in a regional strategy, the variation criteria have been addressed.</p> <p>The Rural Subdivision Principles are addressed below:</p> <p><i>(a) the minimisation of rural land fragmentation</i> – This planning proposal does not result in the fragmentation of rural land, with the zoning remaining for rural purposes and the size of the land capable to be used for small scale agricultural purposes.</p> <p><i>(b) the minimisation of rural land use conflicts, particularly between residential land uses and other rural land uses</i> – There are no conflicting</p>
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	<p>land uses adjoining and the resulting northern lot is consistent with the immediately adjoining small rural-residential sites.</p> <p><i>(c) the consideration of the nature of existing agricultural holdings and the existing and planned future supply of rural residential land when considering lot sizes for rural lands – new rural-residential lots are proposed to the east, further along Old Station Rd. The ability to subdivide the subject lot and create one additional lot, consistent with the surround mix of lot sizes, will not impact upon the provision of the identified rural-residential land.</i></p> <p><i>(d) the consideration of the natural and physical constraints and opportunities of land - There are no unmanageable constraints, with ample room available for a dwelling house and wastewater disposal having regard to the bushfire, acid sulfate soils and flooding. A large portion of the proposed northern lot would remain available for rural purposes.</i></p> <p><i>(e) ensuring that planning for dwelling opportunities takes account of those constraints – Any future dwelling house would be restricted to an area in the north-east corner, having regard to those constraints.</i></p> <p>It is considered that the change to minimum lot size to facilitate a two lot subdivision would assist in continuing the rural activities on the land and contribute to the wider rural community. There would be no fragmentation of rural land and the use remains compatible with the surrounding land.</p> <p>There is unlikely to be a precedent as a result of this change as the surrounding rural land is made up predominantly of smaller rural lots well below that requested by this proposal. The natural constraints of the site have been considered and there is ample room on the northern portion of the site to accommodate a dwelling free of natural hazards.</p> <p>The Planning Proposal is also consistent with the variation criteria for farmland mapping.</p>
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BASIX 2004	This SEPP will apply to a new dwelling on the northern allotment should the minimum lot size of 7ha be adopted and a development application lodged.
No. 55—Remediation of Land	SEPP 55 requires consideration to be given prior to rezoning land, as to whether or not the site is contaminated. The semi-rural / rural-residential nature of the area has occurred for a number of years and is reflective of the variety of lot sizes in the immediately surrounding area. Given that there is no change of use of the site, no further investigation of land contamination is likely required by SEPP 55. Council will confirm if further investigation is required.

3.6 Is the Planning Proposal consistent with applicable Ministerial Directions (s.117 directions)?

Below is a review of the proposal against the relevant S.117 Ministerial Directions.

Direction	Comment
1. Employment and Resources	<i>1.2 - Rural Zones</i>
1.1 Business and Industrial Zones	The proposal is inconsistent with the direction. Whilst it does not rezone land from rural to residential purposes, there will be a resulting increase in density. The land is currently being used for rural purposes is expected to continue. The site has been disturbed over the years and as such no loss in rural value is experienced by allowing a change to the minimum lot size. The inconsistency is permitted where consideration is given to the objective of this direction, which is “to protect the agricultural production value of rural land”. The agricultural value of the land is in fact expected to increase as the northern portion of the site could once again be used for agricultural purposes by the occupiers of the dwelling, as opposed to the current situation where it is not being utilised due to the issue with moving cattle across a busy road. Inconsistencies of minor significance are permitted and it is
1.2 Rural Zones	
1.3 Mining, Petroleum Production and Extractive Industries	
1.4 Oyster Aquaculture	
1.5 Rural Lands	

	<p>considered that in this instance where the zoning remains for rural uses and the viability of the land is likely increased from the change, the inconsistency is considered to be minor.</p> <p><i>1.3 - Mining, Petroleum Production and Extractive Industries</i></p> <p>The site is not mapped on Council's latest mineral resource map and therefore is not identified as being of any mining significance.</p> <p><i>1.5 - Rural Lands</i></p> <p>The purpose of this SEPP (Rural Lands) is to prevent the loss of rural lands and maintain the rural settlements and lifestyle. The site, whilst zoned RU1, does not clearly form part of a rural settlement (being on the edge of the Kempsey township and an emerging rural-residential area to the east) or contribute effectively to the rural lifestyle, with the rural use of the land difficult to maintain with a road through the centre. Rural uses can continue on the site after the change to minimum lot sizes and subdivision occurs into two, with the two separate parcels able to be used for agricultural / rural purposes rather than the existing situation where one person is attempting to maintain cattle over one large allotment with a busy road through the centre. Orderly and economic development will be achieved and the rural use of the land maintained.</p>
<p>4. Hazard and Risk</p> <p>4.1 Acid Sulfate Soils</p> <p>4.2 Mine Subsidence and Unstable Land</p> <p>4.3 Flood Prone Land</p> <p>4.4 Planning for Bushfire Protection</p>	<p><i>4.1 Acid Sulfate Soils</i></p> <p>Council will advise as to whether further investigation of Acid Sulfate Soils is required. The site is identified on Council's LEP maps as being Class 3, 4 and 5. As part of the waste water review for the northern portion of the site, preliminary soil testing occurred.</p> <p>The report accompanies this application and demonstrates that there is ample room available on the site which can accommodate a system for the treatment and disposal of wastewater, without</p>

	<p>impacting upon the draining of adjoining lands and clear of flood prone land.</p> <p>An exemption exists where works disturb less than 1 tonne of soil and the works are not likely to lower the water table. The exemption criteria are satisfied by this planning proposal.</p> <p><i>4.3 Flood Prone Lane</i></p> <p>There is ample room on the site to accommodate a dwelling on the northern portion of the site in an area which is free of flood affectation (refer to Section 3.8 below). Consideration has been given to the existing Kempsey Shire Floodplain Risk Management Plan and Draft Kempsey CBD Flood Risk Management Study and Plan. The potential subdivision of the site into two lots enables an area in the north-eastern corner which is free of flooding and therefore minimises the possibility of loss of life and damage to property. This area is well in excess of Council's standard for rezoning of 1000m² above the flood planning level.</p> <p>According to SES Kempsey Shire Local Flood Plan (July 2012 Table A-2) the 1%AEP flood level in the vicinity of Pola Creek is 8.4m AHD. It could be reasonably argued that this level might be similar for the area where the subject property is located. Thus any portion of the site that is located above ~8.4m AHD should be above the 1%AEP. In the absence of a survey anecdotal evidence suggests that the north eastern part of the subject land appears to be unaffected by flooding.</p> <p>The inconsistency with this direction is supported.</p> <p><i>4.4 Planning for Bushfire Protection</i></p> <p>Accompanying this Planning Proposal is a copy of a Bushfire Report prepared for a two lot subdivision of the site. Refer to Section 3.8 below.</p>
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	<p>The planning proposal is consistent with Planning for Bushfire Protection, 2006. This includes a new property access road, provision of Asset Protection Zones, provision of a water supply reserve and provision of construction and landscape standards. This proposal will not introduce an inappropriate development in a hazardous area and bushfire hazard reduction is not prohibited within the likely APZ.</p>
<p>5. Regional Planning</p> <p>5.1 Implementation of Regional Strategies</p> <p>5.2 Sydney Drinking Water Catchments</p> <p>5.3 Farmland of State and Regional Significance on the NSW Far North Coast</p> <p>5.4 Commercial and Retail Development along the Pacific Highway, North Coast</p> <p>5.5 Development in the vicinity of Ellalong, Paxton and Millfield (Cessnock LGA) (Revoked 18 June 2010)</p> <p>5.6 Sydney to Canberra Corridor (Revoked 10 July 2008. See amended Direction 5.1)</p> <p>5.7 Central Coast (Revoked 10 July 2008. See amended Direction 5.1)</p>	<p><i>5.1 Implementation of Regional Strategies</i></p> <p>A rezoning of the site is not requested and the agricultural / rural use of the land will continue, however, in two components as a result of the road location. A dwelling can be accommodated on the northern portion in a flood free area and the remainder of the site is available for rural uses such as cattle.</p> <p>There will be no significant adverse environmental impacts or loss of agricultural land.</p> <p><i>5.10 Implementation of Regional Plans</i></p> <p>The planning proposal meets the variation criteria under the North Coast Regional Plan for farmland mapped areas and it has been demonstrated to be of minor significance (Refer to Section 3.3). The overall intent of the regional plan is achieved with the rural zoning remaining unchanged and therefore not undermining the strategies or rural-residential in identified areas. The vision of the regional plan remains achieved by this proposal.</p>

<p>5.8 Second Sydney Airport: Badgerys Creek</p> <p>5.9 North West Rail Link Corridor Strategy</p> <p>5.10 Implementation of Regional Plans</p>	
<p>6. Local Plan Making</p> <p>6.1 Approval and Referral Requirements</p> <p>6.2 Reserving Land for Public Purposes</p> <p>6.3 Site Specific Provisions</p>	<p>6.1 <i>Approval and Referral Requirements</i></p> <p>Council will provide guidance.</p>

Section C - Environmental, social and economic impact

3.7 Is there any likelihood that critical habitat or threatened species, populations or ecological communities, or their habitats, will be adversely affected as a result of the proposal?

The site is cleared and does not have ecological value.

3.8 Are there any other likely environmental effects as a result of the Planning Proposal and how are they proposed to be managed?

a) Bushfire

A small portion of the site is identified as being within the buffer and category 1 areas on the bushfire maps, as shown below. Neither the buffer nor Category 1 precludes development from occurring on the site for residential purposes. Appropriate asset protection zones can be accommodated within the site. A Bushfire Report has been prepared by David Pensini for a two lot subdivision of the site accompanies this application. The report identifies a number of requirements in relation to any future dwelling proposed to Lot 1. This includes a new property access road, provision of Asset Protection Zones, provision of a

water supply reserve and provision of construction and landscape standards in accordance with Planning for Bushfire Protection, 2006.

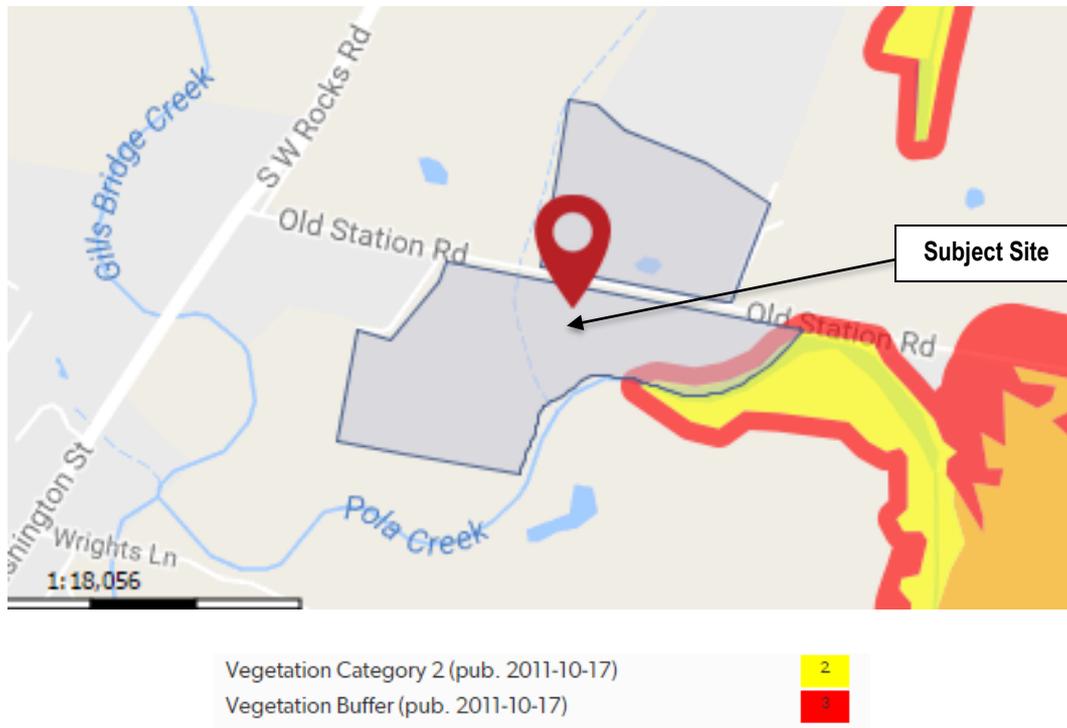


Figure 7: Bushfire Prone Land mapping (source: www.planningportal.nsw.gov.au)

b) Flooding

Based on information provided by Council, the majority of the subject site is located within the Glenrock – Pola Creek Floodway (see Figure 8 below). From discussions with Council, it is understood that the existing flood mapping is rudimentary. The current owners of the site have owned the land for a number of years and experienced a number of floods. In these instances, the site has not experienced flooding as nearby properties have and in fact been used by surrounding landowners as a refuge for their livestock.

According to SES Kempsey Shire Local Flood Plan (July 2012 Table A-2) the 1%AEP flood level in the vicinity of Pola Creek is 8.4m AHD. It could be reasonably argued that this level might be similar for the area where the subject property is located. Thus any portion of the site that is located above ~8.4m AHD should be above the 1%AEP. In the absence of a survey anecdotal evidence suggests that the north eastern part of the subject land appears to be unaffected by flooding.

Design Flood & Peak Flows Estimates

	1% AEP		2% AEP		5% AEP		10% AEP	
	Level (mAHD)	Velocity (m/s)						
Aldavilla	15.3	3.0	14.4	3.0	12.9	2.9	11.7	2.7
Short Street	10.79	3.5	10.13	3.6	9.23	3.5	8.50	3.4
Kempsey Bridge	8.55	4.9	8.24	4.4	7.77	3.8	7.37	3.3
Pola Creek	8.40	-	8.09	-	7.62	-	7.22	-
Glenrock Drain	7.60	2.6	7.30	2.5	6.91	2.5	6.43	2.4
Frederickton	6.53	3.0	6.38	2.8	6.17	2.4	6.00	2.2
Smithtown	4.76	1.7	4.66	1.6	4.50	1.5	4.34	1.4
Jerseyville	3.59	1.3	3.12	1.2	2.45	1.2	2.15	1.2
New Entrance	2.30	3.3	2.20	2.7	2.05	2.1	2.05	1.6

Hydraulic Modelling Report. wpd: 4 August 2009

Table A-2: Design heights



Figure 8 – Extract Glenrock – Pola Creek Floodway

Council currently has on exhibition Draft Kempsey CBD Flood Risk Management Study and Plan. The maps below in Figure 9 are extracts from the Study and Figure 10 is a close up of the subject site which indicates the north-west portion of the site is likely to be identified as floodway.



Figure 10 – Close Up of Extract from Draft Kempsey CBD Flood Risk Management Study and Plan – Recommended Floodway

Based on the above plan, there is ample room for a dwelling to be located on the northern portion of the land as part of a future subdivision including OSSM areas, as well as flood free access to the site.

c) Residential Amenity

There is unlikely to be a conflict between the proposed change to minimum lot size for the subject site and the existing adjoining rural land and existing dwellings. These rural and rural-residential uses and varying lot sizes currently operate without issue.

3.9 How has the Planning Proposal adequately addressed any social and economic effects?

Positive social impacts will arise as a result of the provision of an additional lot, which will continue for rural-residential purposes without the need for a change to zoning.

There are no negative economic impacts expected as a result of the proposal. The proposed land use will efficiently utilise the site and the development of the land will provide jobs throughout the future house

construction on the northern lot. Future occupants of a dwelling will also utilise local services and businesses.

Section D - State and Commonwealth interests

3.10 Is there adequate public infrastructure for the Planning Proposal?

Given the small scale of the Planning Proposal, being infill development, there is not expected to be additional unreasonable demand on the road network, open space, waste facilities or local emergency services. There is no need to upgrade existing infrastructure, with Old Station Road only recently upgraded.

3.11 What are the views of State and Commonwealth public authorities consulted in accordance with the gateway determination?

There are no external authorities identified for consultation, which reflects the minor nature of the Planning Proposal.

4. Part 4 – Mapping

Maps have not been prepared at this stage and will be prepared in consultation with Council.

5. Part 5 – Community Consultation

The Planning Proposal will be placed on public exhibition by Council in accordance with the Department of Planning and Environment's *A Guide to Preparing Local Environmental Plans*. The proposal is considered to be 'low' impact as it is consistent with the pattern of surrounding land use zones and/or land uses, consistent with the strategic planning framework, presents no issues with regard to infrastructure servicing, is not a principal LEP and does not reclassify public land.

6. Part 6 – Project Timeline

Progression of this Planning Proposal to Gateway in a timely manner will allow the subdivision of the lot into two to occur.

7. Conclusion

Consideration is sought from Council for progression of this Planning Proposal to amend the minimum allotment size to enable the subdivision of the subject allotment into two. As is demonstrated in the body of the report there appears to be sufficient justification for the Planning Proposal given the current situation with a road traversing the site and that the rural use of the site will continue following a future subdivision.

Therefore, this Planning Proposal is considered appropriate given the proximity of the site to services, the existing characteristics of the site and allows a sustainable rural use of the land and provision of additional housing for the locality.

Kempsey Shire Council is urged to support and expedite this Planning Proposal and forward the proposal to the Department of Planning for Gateway determination.

Appendices

- A. Bushfire Report
- B. AHIMS Search
- C. BioNet Map
- D. On Site Waste Water Management Report & Soil Testing

**BUSHFIRE HAZARD
ASSESSMENT**

**PROPOSED TWO (2) LOT
SUBDIVISION**

**LOT 424 DP 710381
OLD STATION ROAD,
HAMPTON HALL**

**CLIENT:
ROBERT WICKS
NOVEMBER 2016**

This report has been prepared by David Pensini – Building Certification and Environmental Services with all reasonable skill, care and diligence for Robert Wicks.

The information contained in this report has been gathered from discussions with representatives of Robert Wicks, a review of the plans provided on behalf of Robert Wicks and experience.

No inspection or assessment has been undertaken on other aspects of the proposed development outside the scope of this report.

This report does not imply, nor should it be implied, that the proposed development will comply fully with relevant legislation.

The report shall not be construed as relieving any other party of their responsibilities or obligations.

David Pensini – Building Certification and Environmental Services disclaims any responsibility Robert Wicks and others in respect of any matters outside the scope of this report.

The report is confidential and the writer accepts no responsibility of whatsoever nature, to third parties who use this report, or part thereof is made known. Any such party relies on this report at their own risk.

For and on behalf of David Pensini – Building Certification and Environmental Services.

Prepared by: David Pensini

Signed:



Dated: 19th November 2016

Version	Date	Information relating to report			
		Reason for issue			
1.0	4 th November 2016		Draft		
2.0	19 th November 2016		Issued to Client		
			Prepared by	Verified by	Approved by
		Name	David Pensini		David Pensini
		Signature			

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APPENDIX 2 – Proposed Development

APPENDIX 3 – Proposed Development (Flood Prone Land)

APPENDIX 4 – APZ Compliance Concept

APPENDIX 5 – RFS Best Practice Guidelines – Dwelling Upgrades

1.0 INTRODUCTION

The land which comprises the subject site is currently known as Lot 424 DP 710381 Old Station Road, Hampton Hall.

It is proposed to subdivide the subject site so as to create two (2) separate lots.

This report is based on a site assessment carried out on 4th November 2016.

The purpose of this report is to demonstrate that the bushfire risk is manageable for the subdivision and to determine the bushfire protection management measures which are applicable to the future development of the subject site.

The development is an integrated development and has a requirement for a Bush Fire Safety Authority under Section 100B of the *Rural Fires Act 1997*.

NOTE

The report has been prepared with all reasonable skill, care and diligence.

The information contained in this report has been gathered from field survey, experience and has been completed in consideration of the following legislation.

1. Rural Fires Act 1997.
2. Environmental Planning and Assessment Act 1979.
3. Building Code of Australia.
4. Council Local Environment Plans and Development Control Plans where applicable.
5. NSW Rural Fire Services, Planning for Bushfire Protection, 2006.
6. AS 3959 - 2009 Construction of Buildings in Bushfire Prone Areas.

The report recognizes the fact that no property and lives can be guaranteed to survive a bushfire attack. The report examines ways the risk of bushfire attack can be reduced where the site falls within the scope of the legislation.

The report is confidential and the writer accepts no responsibility of whatsoever nature, to third parties who use this report or part thereof is made known. Any such party relies on this report at their own risk.

This report has been based upon the vegetation characteristics observed at the time of site inspection. No responsibility is taken where the vegetation characteristics of the subject site or surrounding areas is changed or modified beyond that which is presented within this report.

1.1 Objectives

The objectives of this report are to:

- Ensure that the proposed subdivision of the land has measures sufficient to minimize the impact of bushfires; and
- Reduce the risk to property and the community from bushfire.

1.2 Legislative Framework

On 1st August 2002 the Environmental Planning and Assessment Act 1979 and the Rural Fires Act 1997 were both amended to enhance bush fire protection through the development assessment process.

In broad terms, the planning considerations provide two main steps. These involve:

(a) Strategic Planning through;

- the mapping of bush fire prone;
- determining suitable bush fire requirements during the preparation of a Local Environmental Plan and/or Development Control Plan; and
- the identification of the extent to which land is bushfire prone.

(b) Development assessment through;

- obtaining a bush fire safety authority for residential or rural-residential subdivision and special fire protection purpose developments in bushfire prone areas from the Rural Fire Service (RFS);
- seeking advice from the RFS in relation to infill and other developments in bushfire prone areas that cannot comply with the requirements of NSW Rural Fire Service, **Planning for Bushfire Protection**, 2006; and
- the application of additional requirements of the Building Code of Australia (BCA) in relation to construction standards for Class 1, 2, 3, 4 and some Class 9 buildings in bushfire prone areas.

It is noted that this report focuses upon the development assessment processes associated with the proposed subdivision of the subject site.

1.2.1 Objectives for Residential Subdivision Developments

The specific objectives for subdivision developments as provided for by NSW Rural Fire Service, **Planning for Bushfire Protection**, 2006 are to;

- Minimise perimeters of the subdivision exposed to the bush fire hazard. Hourglass shapes, which maximise perimeters and create bottlenecks, should be avoided.
- Minimise bushland corridors that permit the passage of bush fire.
- Provide for the siting of future dwellings away from ridge-tops and steep slopes - particularly up-slopes, within saddles and narrow ridge crests.
- Ensure that separation distances (APZ) between a bush fire hazard and future dwellings enable conformity with the deemed- to-satisfy requirements of the BCA. In a staged development, the APZ may be absorbed by future stages.
- Provide and locate, where the scale of development permits, open space and public recreation areas as accessible public refuge areas or buffers (APZs).
- Ensure the ongoing maintenance of asset protection zones.
- Provide clear and ready access from all properties to the public road system for residents and emergency services.
- Ensure the provision of and adequate supply of water and other services to facilitate effective firefighting.

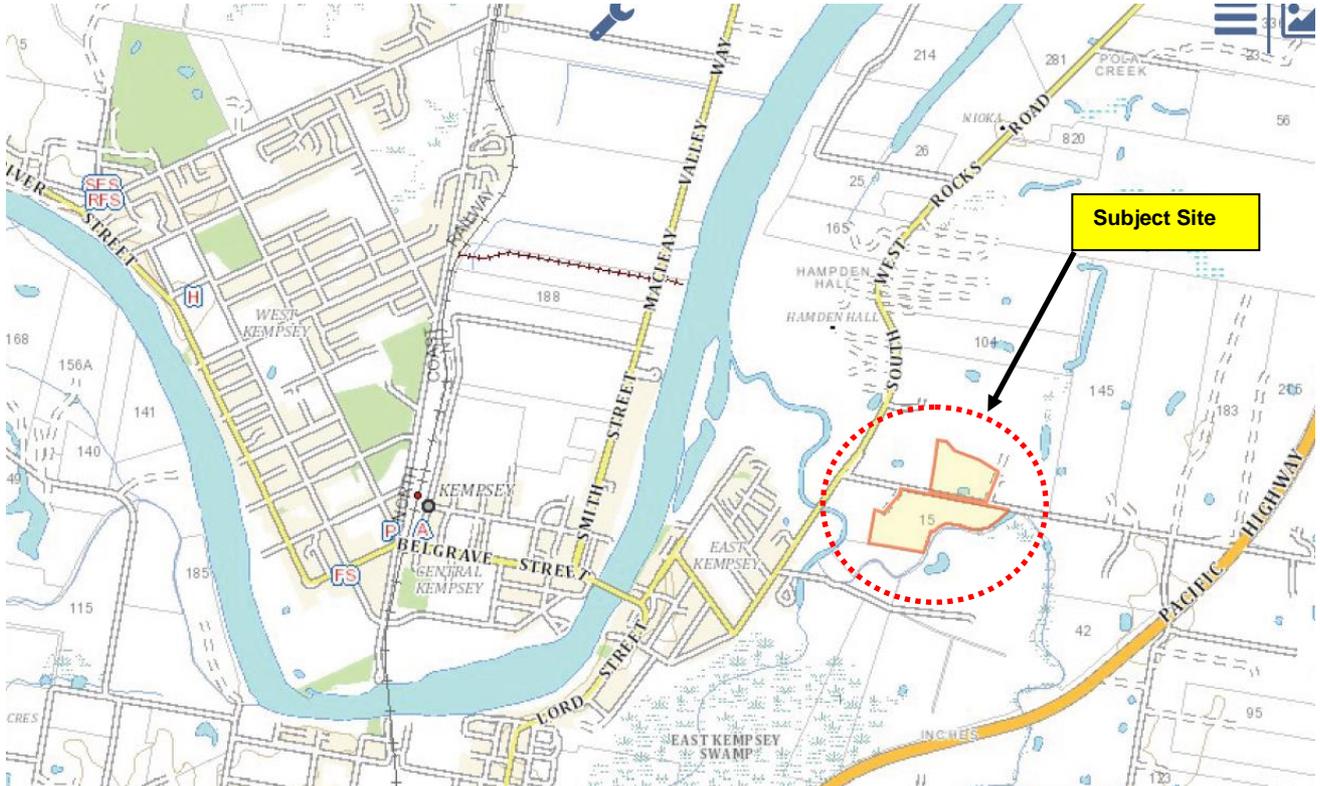
It is noted that the proposed development is consistent with the above objectives together with the relevant acceptable solutions/standards which are applicable to the future residential development of the subject site.

1.3 Location and Site Description

The site of the proposed development consists of one (1) allotment of land which is known as Lot 424 DP 710381 Old Station Road, Hampton Hall.

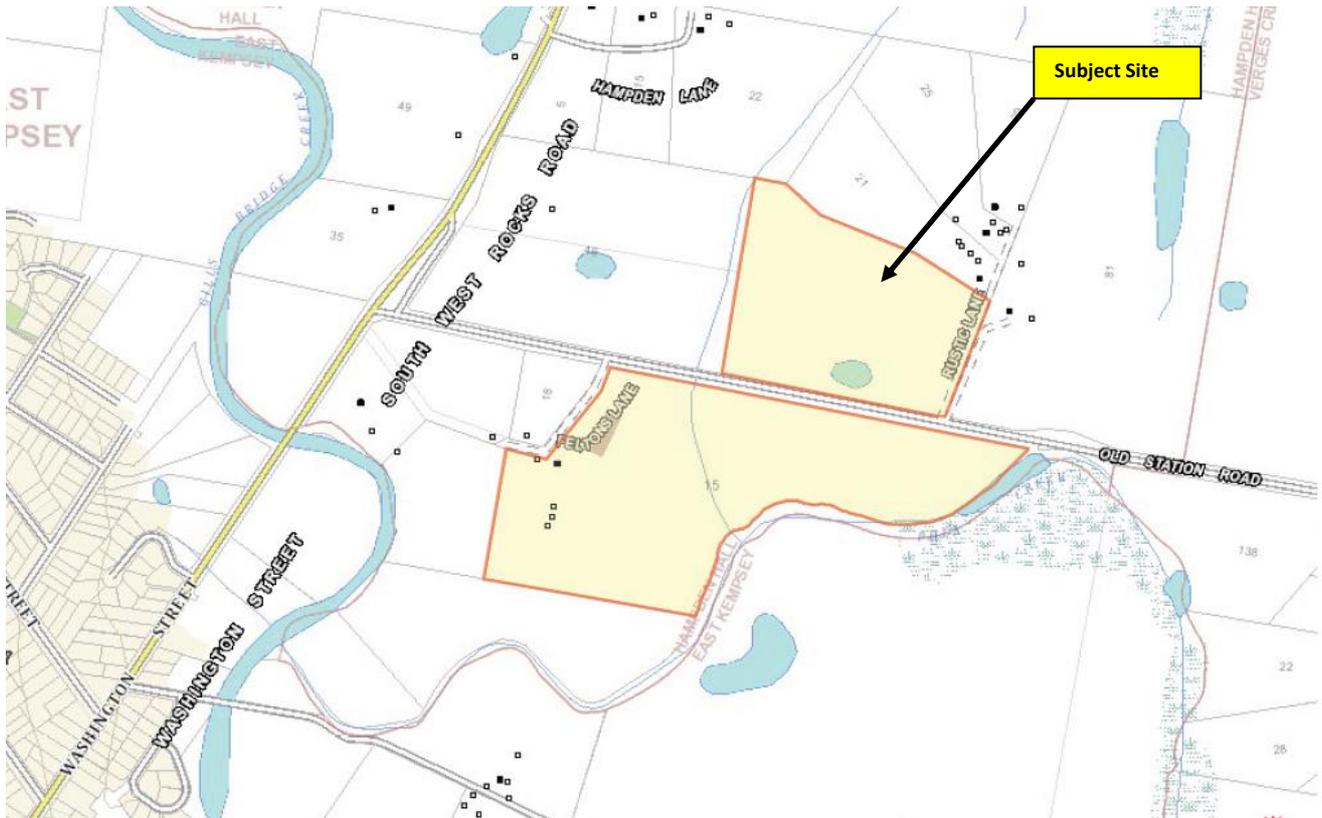
The subject site is located approximately 1.6km to the northeast of the Kempsey Central Business District (CBD) within an area which is locally known as 'Hampton Hall'; refer to **Figure 1** below;

Figure 1 - Site Location



The land within this area has a history of rural land uses with the character of the area reflecting this predominant rural history although the proximity of the urban fringe of Kempsey to the southwest of the subject site does provide for a level of land use variability in the location. Rural sized allotments of land are present in all aspects although some smaller rural residential sized lots are also present in the locality, refer to **Figure 2**.

Figure 2 – Subject Site



The land which is the subject of this report is irregular in shape and occupies an area of some 20.83 hectares, refer to **Appendix 1**. It is noted that the Old Station Road reserve bisects the subject site from west to east whilst the Felton Lane road reserve adjoins portion of the western boundary of the subject site. The meander of Pola Creek defines portion of the southern and eastern boundaries of the subject site.

The topography of the subject site and the immediate area is influenced by a small hill/ridgeline which is present at distance to the north of the subject site. Accordingly the northern portion of the subject site, (to the north of Old Station Road), contains the gentle north to south downslopes associated with the side slopes of the hill/ ridgeline. Adjacent to Old Station Road slope conditions flatten reflecting the flood plain of Pola Creek/Macleay River hydraulic features. A number of small drainage depressions/gullies are present in the southern portion of the subject site however these variations in slope condition are short in length. The topography of adjoining and adjacent land mirrors that of the subject site although land to the west of the subject site is generally flat which reflects the flood plain of both Pola Creek and the Macleay River. At distance to the south of the subject site, slope conditions transition to up slopes which reflects the presence of higher elevated land in this aspect.

Vegetation on the subject site and on adjoining and adjacent land consists of Grasslands with scattered and small clusters of trees. At distance to the east of the subject site are areas of remnant Forested Wetlands and Wet Sclerophyll Forest.

Given that Felton Lane adjoins the subject site along portion of its western boundary and that the Old Station Road reserve bisects the subject site, direct access to public road infrastructure is available to and from the subject site.

The closest Fire Service, (Kempsey NSW Fire Brigade), is located approximately 2.9km to the west of the subject site and the closest fire control centre is located at Kempsey.

1.4 Site History

The subject site is located within a historical rural area which is to the northeast of Kempsey. Rural and rural residential sized allotments of land are present in all aspects.

The subject site contains a two (2) storey residential dwelling which is present in the southwestern corner of the subject site. Access to the existing dwelling is provided for by Felton Lane. Other improvements consist of farm sheds and ancillary buildings, dams and fencing. It is noted that the habitable occupation of the subject site is confined to the southern portion of the subject site, (south of Old Station Road).



Existing dwelling on the subject site – southwestern portion



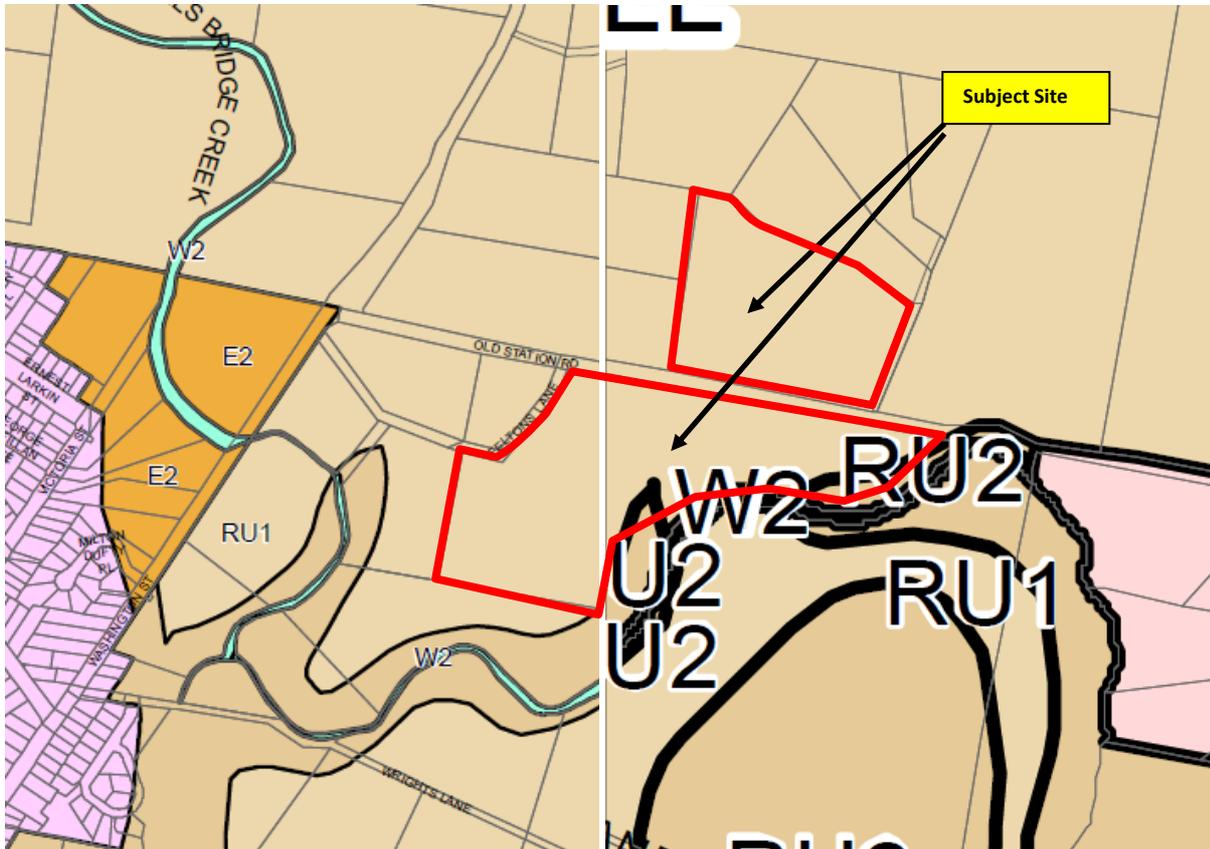
Existing farm buildings on the subject site – southern portion

The vegetation characteristics on the subject site and adjoining and adjacent land appear to have been the subject of substantial historical modification with significant clearing in order to support the productive agricultural use of the land.

Fire has not recently occurred on the subject site or on adjoining and adjacent land.

The subject site has a Rural RU1 (Primary Production) land use zoning whilst land adjoining and adjacent to the subject is zoned Rural RU1 (Primary Production), RU2 (Rural Landscape) and W2 (Recreational Waterways), refer to **Figure 3** below.

Figure 3 – Landuse Zoning



The environmental and heritage features of the subject site are summarized as follows;

Table 1 – Environmental and Heritage Features

ENVIRONMENTAL/HERITAGE FEATURE	COMMENT
Riparian Corridors	There are no riparian corridors on the subject site.
SEPP 14 – Coastal Wetland	The subject site is not identified as being subject to SEPP 14 – Coastal Wetlands.
SEPP 26 – Littoral Rainforest	The subject site is not identified as being subject to SEPP 26 – Littoral Rainforest.
SEPP 44 – Koala Habitat	The site is not subject to SEPP 44 – Koala Habitat
Areas of geological interest	<p>The subject site is identified as potentially containing Class 4 and Class 5 acid sulphate soils. The Class 4 acid sulphate soils are located in the lower lying areas of the subject site with the Class 5 soils nominated as being present in the north-eastern (higher elevated) portion of the subject site. Given the nature of the proposed development issues associated with the exposure of acid sulphate soils are not considered to be relevant.</p> <p>Based upon previous land use it is expected that no land contamination issues will be relevant to the subject site.</p>

Environmental Protection Zones	The subject site has a land use zoning of Rural (RU1) with immediately adjoining and adjacent land zoned Rural RU1 (Primary Production), RU2 (Rural Landscape) and W2 (Recreational Waterways). Land with an Environmental Conservation Zoning, (E2), is present at some distance to the east of the subject site, refer to Figure 3 above.
Land slip	Given the gently undulating nature of the topography of the subject site and surrounding areas land slip is not considered to be an issue for the subject site.
Flood prone land	The subject site identified as being flood prone land and as such is subject to compliance with the flood planning area provisions of Kempsey Councils LEP, 2011. It is noted that the north-eastern portion of the subject site is flood free.
National Park Estate or other Reserves	The subject site does not form part of the National Park Estate or other Reserves.
Threatened species, populations, endangered ecological communities and critical habitat	Given the level of historic disturbance of the subject site no threatened flora or fauna species are expected to be present on the subject site.
Ecologically Endangered Communities (EEC's)	Given the level of historic disturbance the subject site is unlikely to contain Ecologically Endangered Communities (EEC's).
OEH Key Habitats and Corridors	Given the level of historic disturbance the subject site is unlikely to form part of OEH key habitats and corridors.
Aboriginal Heritage	Items of aboriginal heritage are unlikely to be present given the active vegetation modification and management which has occurred on the subject site and the level of site disturbance which is likely to have occurred over the years.

1.5 Development Proposal

It is proposed to subdivide the subject site so as to provide for two (2) separate residential allotments of land, refer to **Appendix 2**.

It is noted that Proposed Lot 1 will occupy the northern portion of the subject site, (to the north of Old Station Road), with Proposed Lot 2 occupying the southern portion of the subject site. The size of the proposed lots is typical for rural/rural residential lots being;

- Proposed Lot 1 – 7.57 hectares.
- Proposed Lot 2 – 13.26 hectares.

Proposed Lot 2 will contain all existing building infrastructure including the existing dwelling and associated farm buildings.

Proposed Lot 1 is vacant of improvements except for fencing and dams. In this regard a flood free area is available in the north-eastern portion of the proposed lot with this area identified as being suitable for the future erection of a dwelling on the lot, refer to **Appendix 3**.

Access to proposed Lot 1 will be available via an existing right of carriageway (Rustic Lane) which connects with Old Station Road and adjoins the eastern boundary of proposed Lot 1. Rustic Lane currently provides access to a number of existing lots to the east/northeast of proposed Lot 1. The use of Rustic Lane for access purposes to proposed Lot 1 removes the need for direct access off Old Station Road.

Access to proposed Lot 2 will continue to be via Felton Lane which adjoins portion of the western boundary of proposed Lot 2. No new public road infrastructure is required in order to support the proposed development.

1.6 Fauna and Flora Issues

A fauna and flora evaluation has not been undertaken in conjunction with this bushfire hazard assessment and as such issues pertaining to fauna and flora are outside the scope of this report.

2.0 BUSHFIRE HAZARD ASSESSMENT

2.1 Procedure

Several factors need to be considered in determining the bushfire hazard for the proposed lots being slope, vegetation type, distance from vegetation and access/egress.

Each of these factors has been reviewed in determining a bushfire hazard rating for the subject site and proposed development.

2.2 Hazard Vegetation

Given the size of the subject site and the vegetation characteristic both on and off the subject site Unmanaged Grasslands were identified as being the bushfire hazard vegetation of most relevance to the proposed development. In this regard the subject site and adjoining and adjacent land contains significant areas of Grasslands with scattered and small clusters of trees.

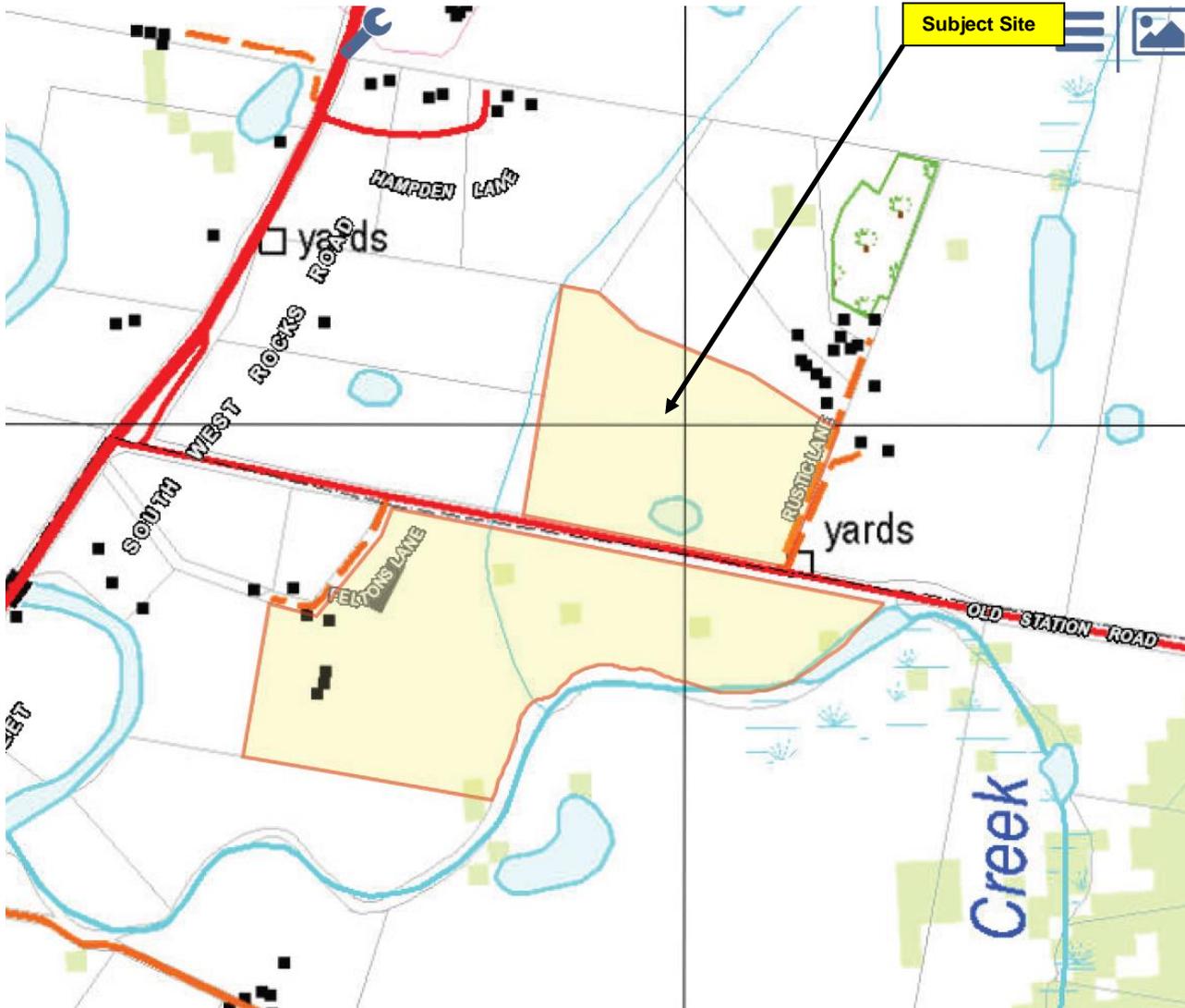
2.3 Slope Assessment

Slope is a major factor to consider when assessing the bushfire risk of any development which is subject to compliance with the requirements of NSW Rural Fire Service, *Planning for Bushfire Protection*, 2006. Therefore the slope of the subject site and surrounding area, (to a distance of 100m), was measured using a Suunto PM-5/360 PC Clinometer.

The topography of the subject site and the immediate area is influenced by a small hill/ridgeline which is present at distance to the north of the subject site. Accordingly the northern portion of the subject site, (to the north of Old Station Road), contains the gentle north to south downslopes associated with the side slopes of the hill/ ridgeline. Adjacent to Old Station Road slope conditions flatten reflecting the flood plain of Pola Creek/Macleay River hydraulic features. A number of small drainage depressions/gullies are present in the southern portion of the subject site however these variations in slope condition are short in length. The topography of adjoining and adjacent land mirrors that of the subject site although land to the west of the subject site is generally flat which reflects the flood plain of both Pola Creek and the Macleay River. At distance to the south of the subject site, slope conditions transition to up slopes which reflects the presence of higher elevated land in this aspect

The slope conditions on the subject site and on adjoining and adjacent land can be seen in **Figure 4** below;

Figure 4 – Topographic Characteristics



The following table indicates the slopes measured within the bushfire hazard vegetation affecting the subject site.

Table 2 - Slope Assessment Results

DIRECTION OF HAZARD	SLOPE degrees	UPSLOPE/DOWN SLOPE
North	1° - 3° (0°)	Flat and Upslope
South	1° - 4°	Downslope
East	1° - 2°	Downslope
West	0°	Flat

****Note:** In accordance with NSW Rural Fire Services, Planning for Bushfire Protection, 2006 and AS3959 – 2009 all upslope vegetation is considered to be 0°.

The above slopes were considered when assessing the required defensible spaces and indicative Bushfire Attack Levels, (BAL's), for any future development/s.

2.4 Vegetation Assessment

The vegetation on and surrounding the subject site was assessed over a distance of 140m from the proposed development.

The vegetation formations were classified using the system adopted as per Keith (2004) and in accordance with Appendix 3 of NSW Rural Fire Service, **Planning for Bushfire Protection**, 2006 and Table 2.3 of AS 3959 - 2009.

The following information is provided in relation to the floristic characteristics of the subject site and adjoining and adjacent land. In adopting a conservative approach to bushfire hazard assessment worst case vegetation characteristics have been identified.

2.4.1 Vegetation within Subject Site

The subject site contains Grasslands with scattered and small clusters of trees. Whilst some areas of the subject site are being actively used for cropping and other livestock management purposes; in adopting a conservative approach to bushfire hazard assessment an Unmanaged Grassland classification has been adopted for the subject site.



Scattered trees amongst grasslands over the southern portion of the subject site



Scattered trees amongst grasslands over the northern portion of the subject site



Scattered trees amongst grasslands over central portion of the subject site

2.4.2 Vegetation on Adjoining and Adjacent Land to Subject Site

The following vegetation characteristics were identified as being relevant to the proposed subdivision of the subject site.

Vegetation on adjoining and adjacent land to the north, south, east and west consists of scattered and small clusters of trees amongst grasslands associated with rural and rural residential lots in these aspects.



Scattered trees amongst grasslands to the east of the subject site



Scattered trees amongst grasslands to the south of the subject site



Scattered trees amongst grasslands to the southwest of the subject site



Scattered trees amongst grasslands to the northwest of the subject site

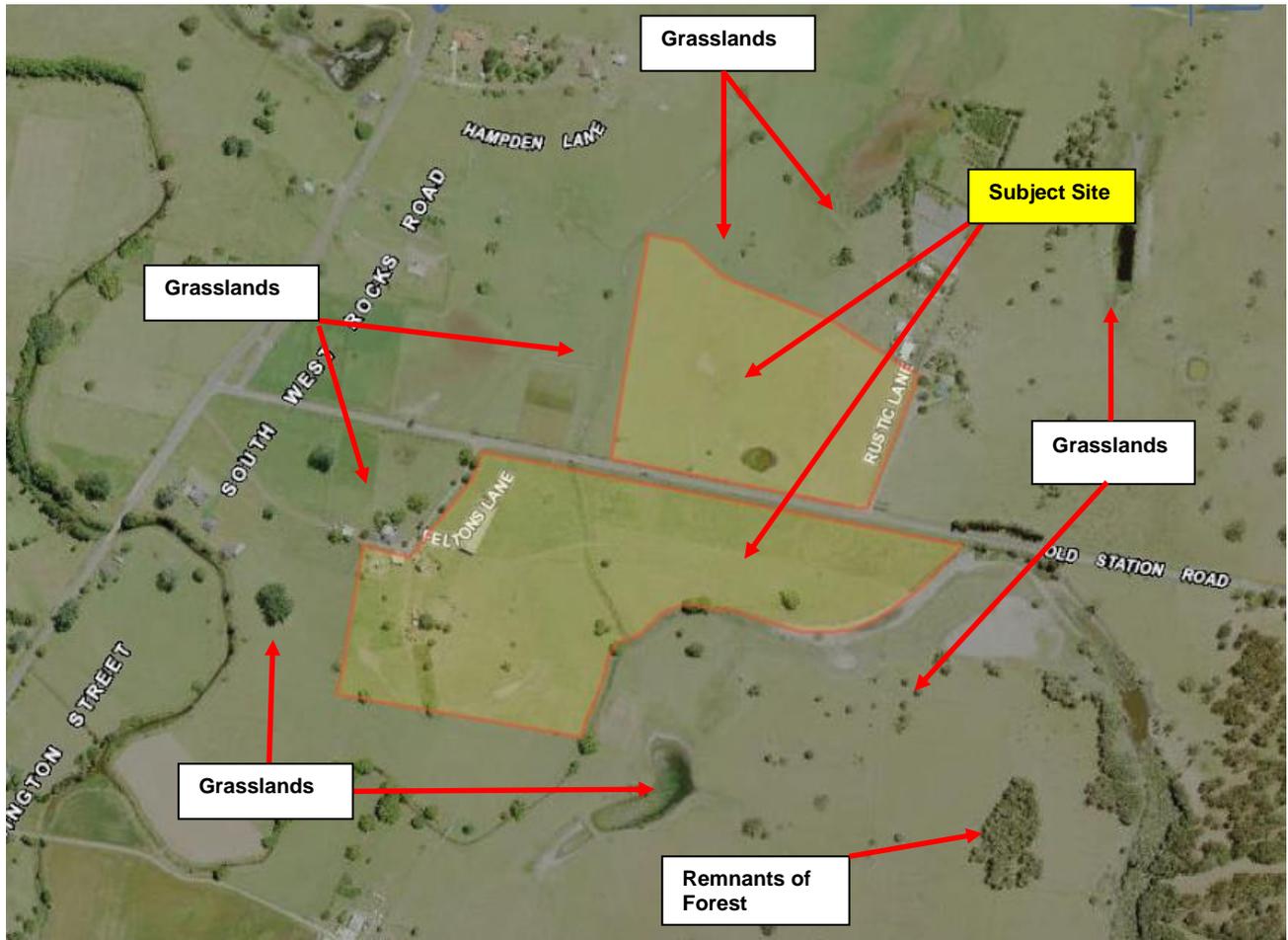
Some remnants of Forest and Forested Wetland vegetation are present to the southeast of the subject site how this vegetation is greater than 140m from the boundaries of the subject site and as such not considered to be of relevance to this assessment.



Forest and Forested Wetland remnants at distance to the east of the subject site

An indication of the relationship of the vegetation of bushfire significance to the proposed development is presented in **Figure 5** below.

Figure 5 - Vegetation Relationships to the Subject Site



The following table summarizes the various vegetation structures which are of bushfire significance to the proposed allotments.

Table 3 – Summary of Vegetation Characteristics

ASPECT	VEGETATION DESCRIPTION	VEGETATION CLASSIFICATION – (Keith, 2004)	VEGETATION CLASSIFICATION – (AS3959 - 2009)**
North	Grasslands on the subject site and on adjoining and adjacent land	Grassland	Grassland
South	Grasslands on the subject site and on adjoining and adjacent land	Grassland	Grassland
East	Grasslands on the subject site and on adjoining and adjacent land	Grassland	Grassland
West	Grasslands on the subject site and on adjoining and adjacent land	Grassland	Grassland

2.5 Fire Danger Index

The fire weather for the site is assumed on the worst-case scenario. In accordance with NSW Rural Fire Services, *Planning for Bushfire Protection*, 2006 and Table 2.1 of AS 3959 - 2009, the fire weather for the site is based upon the 1:50 year fire weather scenario and has a Fire Danger Index (FDI) of 80.

3.0 BUSHFIRE THREAT REDUCTION MEASURES

3.1 NSW Rural Fire Services, *Planning for Bushfire Protection*, 2006

The following issues and constraints have been identified through considering the requirements of NSW Rural Fire Service, *Planning for Bushfire Protection*, 2006 as they apply to the future residential development of the proposed subdivision.

It is noted that for the purposes of this report it has been assumed that future development concepts of the proposed lots do not contain uses which are considered to be Special Fire Protection Purpose development in accordance with NSW Rural Fire Service, *Planning for Bushfire Protection*, 2006.

3.1.1 Defendable Space/Asset Protection Zone

To ensure that the aims and objectives of NSW Rural Fire Service, *Planning for Bushfire Protection*, 2006 are achieved for the proposed subdivision, a defendable space/Asset Protection Zone (APZ) between the asset and the hazard should be provided.

The APZ provides for; minimal separation for safe fire fighting, reduced radiant heat, reduced influence of convection driven winds, reduced ember viability and dispersal of smoke. The APZ consists of an Inner Protection Area (IPA) and Outer Protection Area (OPA). The IPA is an area closest to the buildings that incorporates defendable space and is used for managing heat intensities at the building surface. The OPA is positioned adjacent to the hazard and the purpose of the OPA is to reduce the potential length of flame by slowing the rate of spread, filtering embers and suppressing the crown fire.

Section 4.1.3 of NSW Rural Fire Service, *Planning for Bushfire Protection*, 2006 provides the performance requirements and acceptable solutions that must be complied with in relation to the provision of APZ's to each of the proposed lots. These requirements are summarized as follows;

Table 4 - APZ Requirements (PfBP 2006)

<i>Intent of measures: to provide sufficient space and maintain reduced fuel loads, so as to ensure radiant heat levels at buildings are below critical limits and to prevent direct flame contact with a building.</i>	
The intent may be achieved where:	
Performance Criteria	Acceptable Solutions
<ul style="list-style-type: none"> radiant heat levels at any point on a proposed building will not exceed 29 kW/m² 	<ul style="list-style-type: none"> an APZ is provided in accordance with the relevant tables/ figures in Appendix 2 of NSW RFS Planning for Bushfire Protection 2006 the APZ is wholly within the boundaries of the development site. Exceptional circumstances may apply (see section 3.3 of NSW RFS Planning for Bushfire Protection 2006)
<ul style="list-style-type: none"> APZs are managed and maintained to prevent the spread of a fire towards the building. 	<ul style="list-style-type: none"> in accordance with the requirements of Standards for Asset Protection Zones (RFS, 2005) <i>Note: A Monitoring and Fuel Management Program should be required as a condition of development consent.</i>
<ul style="list-style-type: none"> APZ maintenance is practical, soil stability is not compromised and the potential for crown fires is negated 	<ul style="list-style-type: none"> the APZ is located on lands with a slope less than 18 degrees.

The following table indicates the minimum required APZ's between the various hazards and a future dwelling positioned on each of the proposed lots in order to achieve compliance with the

radiant heat performance criteria of 29 kW/m² as assessed using AS3959 – 2009 which is relevant to residential dwellings located on the proposed lots.

Table 5 - Asset Protection Zone Requirements (PfBP 2006)

DIRECTION OF HAZARD	VEGETATION TYPE	SLOPE	IPA	OPA	TOTAL REQUIRED APZ	MINIMUM APZ ACHIEVABLE (to dwellings within Lots)	COMPLIANCE (with Minimum APZ Requirements)
Proposed Lot 1							
North	Grassland	1° - 3° (0°) Flat/ Upslope	10m	-	10m	>10m	
South	Grassland	1° - 4° Down slop	10m	-	10m	>10m	
East	Grassland	1° - 2° Down slop	10m	-	10m	>10m	
West	Grassland	0° Flat	10m	-	10m	>10m	
Proposed Lot 2							
Northwest	Grassland	1° - 3° (0°) Flat/ Upslope	10m	-	10m	>10m	
South	Grassland	1° - 4° Down slop	10m	-	10m	>10m	
East	Grassland	1° - 2° Down slop	10m	-	10m	>10m	
West	Grassland	0° Flat	10m	-	10m	>10m	

The required APZ's for all of the proposed lots can be achieved within the boundaries of each of the subject lots or via managed infrastructure on adjoining and adjacent land, (e.g. road reserves), and accordingly it is considered that suitable APZ's will be available for each of the subject lots.

It is therefore considered that suitable APZ's will be available for each of the proposed new lots having regard to the proposed lot shapes and sizes and the proposed and possible future development of the proposed lots. Compliance with the APZ requirements of NSW Rural Fire Service, **Planning for Bushfire Protection**, 2006 is demonstrated as follows;

Table 6 – Compliance with PfBP 2006 APZ Requirements

Intent of measures: to provide sufficient space and maintain reduced fuel loads, so as to ensure radiant heat levels at buildings are below critical limits and to prevent direct flame contact with a building.		
The intent may be achieved where:		
Performance Criteria	Acceptable Solutions	Compliance
<ul style="list-style-type: none"> radiant heat levels at any point on a proposed building will not exceed 29 kW/m² 	<ul style="list-style-type: none"> an APZ is provided in accordance with the relevant tables/ figures in Appendix 2 of NSW RFS Planning for Bushfire Protection 2006 the APZ is wholly within the boundaries of the development site. Exceptional 	APZ's can be provided in accordance with Appendix 2 of NSW RFS Planning for Bushfire Protection 2006.

	circumstances may apply (see section 3.3 of NSW RFS Planning for Bushfire Protection 2006)	Required APZ's can be wholly located within the boundaries of each of the proposed lots or via adjoining and adjacent public infrastructure.
<ul style="list-style-type: none"> • APZs are managed and maintained to prevent the spread of a fire towards the building. 	<ul style="list-style-type: none"> • in accordance with the requirements of Standards for Asset Protection Zones (RFS, 2005) <i>Note: A Monitoring and Fuel Management Program should be required as a condition of development consent.</i> 	 APZ's can be managed and maintained in accordance with the requirements of Standards for Asset Protection Zones (RFS, 2005).
<ul style="list-style-type: none"> • APZ maintenance is practical, soil stability is not compromised and the potential for crown fires is negated 	<ul style="list-style-type: none"> • the APZ is located on lands with a slope less than 18 degrees. 	 All APZ's will be located on land with a slope less than 18 degrees.

It is noted that the provision of minimum 50m wide APZ to each of the existing dwellings would provide for a low level of bushfire attack.

Having regard to the APZ requirements specified above it is noted that the proposed subdivision does not compromise the achievement of available APZ's for the existing dwelling which is to be located on proposed Lot 2. The existing level of bushfire threat to the existing dwelling will remain unchanged as a result of the proposed subdivision.

A concept plan for the provision of APZ's to proposed Lot 1 is included as **Appendix 4**.

3.1.2 Defendable Space/Asset Protection Zone Management

Areas identified as forming part of the minimum APZ requirements for any future residential developments on the proposed lots must be managed so as to comply with the standards which are applicable to Asset Protection Zones as follows;

(i) Inner Protection Area (IPA)

An IPA should provide a tree canopy cover of less than 15% and should be located greater than 2 metres from any part of the roofline of a building.

Garden beds of flammable shrubs are not to be located under trees and should be no closer than 10m from an exposed window or door.

Trees should have lower limbs removed up to a height of 2 metres above the ground

3.1.3 Operational Access and Egress

Access to the proposed lots will generally remain consistent with the current access strategy for the land in that access to the subject lots will be via existing public road infrastructure, (Old Station Road and Felton Lane).

Access to proposed Lot 1 will be available via an existing right of carriageway (Rustic Lane) which connects with Old Station Road and adjoins the eastern boundary of proposed Lot 1. Rustic Lane currently provides access to a number of existing lots to the east/northeast of proposed Lot 1. The use of Rustic Lane for access purposes to proposed Lot 1 removes the need for direct access off Old Station Road.

Access to proposed Lot 2 will continue to be via Felton Lane which adjoins portion of the western boundary of proposed Lot 2. No new public road infrastructure is required in order to support the proposed development.

Old Station Road and Felton Lane are two wheel drive, all weather two way bitumen sealed public roads. Rustic Lane is a two wheel drive, all weather two way bitumen sealed right of carriageway.



Old Station Road – looking from the west towards the east



Felton Lane – looking from the north towards the south

Accordingly the access and egress strategy of the proposed lots is from the east and west from areas which would be protected from the impacts of bushfire. In this regard it is noted that travel via Old Station Road to the west provides for connection to South West Rocks Road which is a major connecting road between Kempsey to the southwest and South West Rocks in the northeast.

It is further noted that the existing public road infrastructure provides for travel to and from areas which would be protected from the impacts of bushfire with the principle direction of movement being away from areas of bushfire hazard vegetation, (urban areas of Kempsey to the southwest of the subject site).

A two-wheel drive all weather access driveway from Rustic Way to any future residential dwelling on proposed Lot 1 will be required to be provided. The relevant internal road provisions and relevant compliance comments are summarized as follows;

Table 7 - Acceptable Solutions (Access/Internal Roads)

<p>Intent of measures: to provide safe access to/from the public road system for fire fighters providing property protection during a bush fire and for occupants faced with evacuation.</p>	
<p>The intent may be achieved where:</p>	
Performance Criteria	Acceptable Solutions
<p>Access to properties is provided in recognition of the risk to fire fighters and/or evacuating occupants.</p>	<p>At least one alternative property access road is provided for individual dwellings (or groups of dwellings) that are located more than 200 metres from a public through road</p>
<p>The capacity of road surfaces and bridges is sufficient to carry fully loaded fire fighting vehicles.</p> <p>All weather access is provided.</p>	<p>Bridges clearly indicate load rating and pavements and bridges are capable of carrying a load of 15 tonnes.</p> <p>Roads do not traverse a wetland or other land potentially subject to periodic inundation (other than a flood or storm surge).</p>
<p>Internal road widths and design enable safe access for emergency services and allow crews to work with equipment about the vehicle</p>	<p>A minimum carriageway width of four metres for rural-residential areas, rural landholdings or urban areas with a distance of greater than 70 metres from the nearest hydrant point to the most external part of a proposed building (or footprint).</p> <p><i>Note: No specific access requirements apply in a urban area where a 70 metres unobstructed path can be demonstrated between the most distant external part of the proposed dwelling and the nearest part of the public access road (where the road speed limit is not greater than 70kph) that supports the operational use of emergency firefighting vehicles (i.e. a hydrant or water supply).</i></p> <p>In forest, woodland and heath situations, rural property access roads have passing bays every 200 metres that are 20 metres long by two metres wide, making a minimum trafficable width of six metres at the passing bay.</p> <p>A minimum vertical clearance of four metres to any overhanging obstructions, including tree branches.</p> <p>Internal roads for rural properties provide a loop road around any dwelling or incorporate a turning circle with a minimum 12 metre outer radius.</p> <p>Curves have a minimum inner radius of six metres and are minimal in number to allow for rapid access and egress.</p> <p>The minimum distance between inner and outer curves is six metres.</p> <p>The crossfall is not more than 10 degrees.</p> <p>Maximum grades for sealed roads do not exceed 15 degrees and not more than 10 degrees for unsealed roads.</p> <p><i>Note: Some short constrictions in the access may be accepted where they are not less than the minimum (3.5m), extend for no more than 30m and where the obstruction cannot be reasonably avoided or removed. The</i></p>

	<p><i>gradients applicable to public roads also apply to community style development property access roads in addition to the above.</i></p> <p>Access to a development comprising more than three dwellings have formalised access by dedication of a road and not by right of way.</p>
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In the context of the location of the proposed lots and their relationship with existing rural and urban development it is considered that access and egress to and from the proposed lots can be provided in compliance with the relevant requirements of NSW Rural Fire Services, **Planning for Bushfire Protection**, 2006.

3.1.4 Services - Water, Gas and Electricity

As set out in Section 4.1.3 of NSW Rural Fire Services, **Planning for Bushfire Protection**, 2006, developments in bushfire prone areas must maintain a water supply reserve dedicated to firefighting purposes.

As proposed Lot 1 will not be serviced with reticulated mains water supply the erection of a dwelling on the proposed allotment will need to incorporate the provision of a minimum 20,000-litre water tank which is available for firefighting purposes. In this regard any pump used to supply water for firefighting purposes should be adequately shielded from bushfire hazard. **Please note that the use of above ground plastic tanks to comply with the requirement for the provision of a dedicated firefighting water supply for any future dwellings on proposed Lot 1 is not acceptable.**

With regards to water supply the following should be noted as being applicable to the provision of water supply to future residential development:

- A suitable connection for firefighting purposes is to be made available and located within the IPA. A 65mm Storz outlet with a Gate or Ball valve is to be provided.
- All above ground water pipes external to proposed buildings are metal including and up to any taps. Pumps are to be shielded.
- The use of heavy duty hoses with wide spray nozzles is recommended with hoses able to reach all parts of the proposed eco-tourism lodge.
- The water supply is to be made accessible for tankers with suitable hardstand area adjacent or within close proximity of the supply.
- In consideration of the possible loss of electricity, a secondary power supply or a petrol/diesel pump will need to be provided. This secondary supply is to be adequately shielded from the fire.

Electricity supply is required to be extended to service the proposed development.

Reticulated gas services are not available to the site, however any reticulated or bottled gas supply is to be installed and maintained in accordance with AS1596 and the requirements of the relevant authorities. Metal piping is to be used. All fixed gas cylinders are to be kept clear of all flammable materials to a distance of 10m and shielded on the hazard side of the installation.

If gas cylinders need to be kept close to a building, the release valves are to be directed away from the building and at least 2m away from any combustible material, so that they do not act as a catalyst to combustion. Connects to and from gas cylinders need to be metal. Polymer sheathed flexible gas supply lines to gas meters adjacent to buildings are not to be used.

The incorporation into the proposed subdivision of the relevant provisions of the following acceptable solutions as provided for by 4.1.3 of NSW Rural Fire Services, **Planning for Bushfire Protection**, 2006 will ensure compliance with the intent for the provision of services to each of the proposed lots.

Table 8 – Service Provision Requirements

<p>Intent of measures: to provide adequate services of water for the protection of buildings during and after the passage of a bush fire, and to locate gas and electricity so as not to contribute to the risk of fire to a building</p>	
<p>The intent may be achieved where:</p>	
Performance Criteria	Acceptable Solutions
<p>Non-reticulated water supply areas</p> <ul style="list-style-type: none"> for rural-residential and rural developments (or settlements) in bush fire 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 	<ul style="list-style-type: none"> the minimum dedicated water supply required for firefighting purposes for each occupied building excluding drenching systems, is provided in accordance with Table 4.2. a suitable connection for firefighting purposes is made available and located within the IPA and away from the structure. A 65mm Storz outlet with a Gate or Ball valve is provided. or Ball valve and pipes are adequate for water flow and are metal rather than plastic. underground tanks have an access hole of 200mm to allow tankers to refill direct from the tank. A hardened ground surface for truck access is supplied within 4 metres of the access hole. 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. all above ground water pipes external to the building are metal including and up to any taps. Pumps are shielded.
<p>Electricity Services</p> <ul style="list-style-type: none"> location of electricity services limits the possibility of ignition of surrounding bush land or the fabric of buildings regular inspection of lines is undertaken to ensure they are not fouled by branches. 	<ul style="list-style-type: none"> where practicable, electrical transmission lines are underground. where overhead electrical transmission lines are proposed: <ul style="list-style-type: none"> lines are installed with short pole spacing (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 Energy Australia (NS179, April 2002).
<p>Gas services</p> <ul style="list-style-type: none"> location of gas services will not lead to ignition of surrounding bush land or the fabric of buildings 	<ul style="list-style-type: none"> reticulated or bottled gas is installed and maintained in accordance with AS 1596 and the requirements of relevant authorities. Metal piping is to be used. 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. if gas cylinders need to be kept close to the building, the release valves are directed away from the building and at least 2 metres away from any combustible material, so that they do not act as a catalyst to combustion. Connections to and from gas cylinders are metal. polymer sheathed flexible gas supply lines to gas meters adjacent to buildings are not used.

The provision of services to support the future residential occupation or other forms of development of the proposed lots would need to have regard to the specific details of the development of each of the proposed lots. Notwithstanding this suitable and relevant services can be provided to each of the proposed lots.

3.1.5 Landscaping

Landscaping is a major cause of fire spreading to buildings, and therefore any landscaping proposed in conjunction with the proposed development of the subject site will need consideration when planning, to produce gardens that do not contribute to the spread of a bushfire.

When planning any future landscaping surrounding the proposed subdivision development, consideration should be given to the following:

- The choice of vegetation – consideration should be given to the flammability of the plant and the relation of their location to their flammability and ongoing maintenance to remove flammable fuels.
- Trees as windbreaks/firebreaks – Trees in the landscaping can be used as windbreaks and also firebreaks by trapping embers and flying debris.
- Vegetation management – Maintain a garden that does not contribute to the spread of bushfire.
- Maintenance of property – Maintenance of the property is an important factor in the prevention of losses from bushfire.

Appendix 5 of NSW Rural Fire Services, **Planning for Bushfire Protection**, 2006, contains standards that are applicable to the provision and maintenance of landscaping. Any landscaping proposed to be undertaken in conjunction with any future development of the areas which are the subject of this report is to comply with the principles contained in Appendix 5 of NSW Rural Fire Services, **Planning for Bushfire Protection**, 2006.

Compliance with Appendix 5 of NSW Rural Fire Services, **Planning for Bushfire Protection**, 2006, will satisfy the intent of the bush fire protection measures that are applicable to the provision of landscaping.

3.1.6 Construction Requirements

It is noted that Appendix 3 of NSW Rural Fire Service, **Planning for Bushfire Protection**, 2006 now contains specific construction requirements which the NSW Rural Fire Service will seek to impose, through the development control process, in addition to the construction requirements contained within AS3959 – 2009.

Based upon the configuration and size of the proposed lots it is considered that the requirements of NSW Rural Fire Services, **Planning for Bushfire Protection**, 2006 for the siting, design and construction of any future residential buildings can be satisfied.

The relevant requirements of NSW Rural Fire Services, **Planning for Bushfire Protection**, 2006, are summarized as follows;

Table 9 – Building Siting and Design Requirements (PfBP 2006)

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS
<p>in relation to siting and design:</p> <ul style="list-style-type: none"> • buildings are sited and designed to minimize the risk of bush fire attack. 	<ul style="list-style-type: none"> • buildings are designed and sited in accordance with the siting and design principles
<p>in relation to construction standards:</p> <ul style="list-style-type: none"> • it is demonstrated that the proposed building can withstand bush fire attack in the form of wind, smoke, embers, radiant heat and flame contact . 	<ul style="list-style-type: none"> • construction determined in accordance with Appendix 3 and the <i>Requirements for attached garages and others structures</i>

It is also noted that the construction of the existing dwelling, (to be located on proposed Lot 2), predates any bushfire threat reduction requirements in NSW. To assist in achieving a better bushfire protection outcome for the overall property, consideration should be given to the implementation of the Rural Fire Service document “*Best Practice Guidelines – Dwelling Upgrades*” for the upgrading of existing dwelling in order to comply with the intent of the NSW Rural Fire Service, **Planning for Bushfire Protection**, 2006 and AS3959-2009 Construction of Buildings in Bushfire Prone Areas.

3.2 Construction of Buildings in Bushfire Prone Areas

3.2.1 General

The bushfire construction requirements of Volume 2 of the Building Code of Australia for residential dwellings are now applicable in NSW. In this regard the Building Code of Australia provides that compliance with the relevant requirements of AS3959 – 2009 satisfies the performance requirements which are applicable to Part 3.7.4, (Bushfire Areas), of Volume 2 of the Building Code of Australia.

It is however noted that there are a number of NSW variations to the application of AS3959 – 2009 including a restriction on the utilization of the Bushfire Attack Level – Flame Zone requirements of the Australian Standard as a 'deemed to satisfy solution' for these situations. Consequently in NSW all situations which are determined as being subject to the Bushfire Attack Level – Flame Zone requirements of AS3959 – 2009 must be treated on merit with construction requirements being determined on a site specific assessment basis.

Given that the proposed development does not involve the erection of any residential buildings the determination of Bushfire Attack Levels that would be applicable to new buildings is not relevant at this time. Notwithstanding this it is noted that the incorporation of the suitable APZ's into any specific development can provide for a worst case Bushfire Attack Level of BAL 29 for any future residential dwelling on proposed Lot 1.

The following Bushfire Attack Level assessment is therefore provided in relation to the future development within proposed Lot 1.

3.2.2 Vegetation

To complete the assessment under AS 3959 (2009) the vegetation, as originally assessed in accordance with Keith, has to be converted to Specht. The following table shows the conversion:

Table 10 – Summary of Vegetation Characteristics

ASPECT	VEGETATION CLASSIFICATION – (Keith, 2004)	VEGETATION CLASSIFICATION – (Specht)
North	Grassland	Grassland
South	Grassland	Grassland
East	Grassland	Grassland
West	Grassland	Grassland

3.2.3 AS3959 – 2009 Construction of Buildings in Bushfire Prone Areas

The following construction requirements in accordance with AS 3959 – 2009 *Construction of Buildings in Bushfire Prone Areas* is required for the bushfire attack level categories.

Table 11 – Bushfire Attack Levels

BUSHFIRE ATTACK LEVEL (BAL)
No construction requirements under AS 3959-2009
BAL - 12.5
BAL - 19
BAL - 40
BAL - FZ

Based upon the information presented in Section 2 of this report the following Bushfire Attack Levels pursuant to AS3959 – 2009 have been determined as being applicable to a future

dwelling erected on proposed Lot 1. It is noted that the following BAL assessment has been based upon the provision of the minimum required Asset Protection Zones, refer to **Table 5** of this report. It is noted that given the size of the flood free area of proposed Lot 1 it is possible that the provision of APZ's will exceed the minimum requirements as provided for by **Table 5** of this report.

Table 12 – Bushfire Attack Levels for Nominated Vegetation Classifications and Slopes

ASPECT	VEGETATION CLASSIFICATION	DISTANCE (of Future Dwelling from Hazard Vegetation)	SLOPE	BUSHFIRE ATTACK LEVEL (BAL)
Proposed Lot 1				
North	Grassland	>10m	1° - 3° (0°) Flat/ Upslope	BAL 29
South	Grassland	>10m	1° - 4° Down slop	BAL 29
East	Grassland	>10m	1° - 2° Down slop	BAL 29
West	Grassland	>10m	0° Flat	BAL 29

The information presented in the above table indicates that under the worst case spatial separation scenario between future residential buildings on proposed Lot 1 and areas of bushfire hazard vegetation, developments would be subjected to a worst case Bushfire Attack Level of BAL 29 by virtue of the vegetation which is present on the subject site and on adjoining land to the subject site. This outcome is consistent with the acceptable solution requirements of NSW Rural Fire Service, *Planning for Bushfire Protection*, 2006.

It is also noted that it will be necessary to position any proposed farm sheds/ancillary buildings on proposed Lot 1 at least 10m from any residential dwelling otherwise it will be necessary for the construction of the shed/s and ancillary buildings to comply with the standards which are applicable to the proposed dwelling.

4.0 SUMMARY OF FINDINGS

The following requirements are provided in response to the proposed subdivision as provided for in **Appendix 2** of this report;

- (i) Any future development of proposed Lot 1 will require the construction of a new property access road to any dwelling which is erected on proposed Lot 1. Future property access road/s constructed on proposed Lot 1 are to comply with the relevant provisions of the property access road requirements of Section 4.1.3 of NSW Rural Fire Services, *Planning for Bushfire Protection*, 2006.
- (ii) Asset Protection Zones for proposed development are to be provided to the proposed development in accordance with **Table 5** of this report.
- (iii) A water supply reserve as detailed in Section 3.1.4 of this report is to be provided to the proposed development.
- (iv) Other services are to be provided to the proposed development in accordance with the requirements detailed in Section 3.1.4 of this report.
- (v) Adopt the landscaping principals in accordance with Section 3.1.5 of this report.

- (vi) The construction of a dwelling on proposed Lot 1 must comply with the relevant requirements of NSW Rural Fire Service, **Planning for Bushfire Protection**, 2006.
- (vii) Any future development of each of the proposed lots is to be the subject of a development specific Bushfire Hazard Assessment in order to determine development specific bushfire threat management requirements including the relevant Bushfire Attack Levels which are applicable to residential buildings.

5.0 RECOMMENDATIONS

In addition to the requirements of this report it is recommended that a bushfire survival plan be developed and implemented for the subject site. In this regard your attention is drawn to the following documents which may be of assistance in the preparation of a bushfire survival plan;

- NSW Rural Fire Service – Fact Sheet 1 – Bushfire Survival Plans.
- NSW Rural Fire Service – Fact Sheet 2 – Bushfire Preparation.
- NSW Rural Fire Service – Fact Sheet 3 – Prepare, Act, Survive.

To assist in achieving a better bushfire protection outcome for the overall property, consideration should be given to the implementation of the Rural Fire Service document “*Best Practice Guidelines – Dwelling Upgrades*” for the upgrading of existing dwelling which is located on proposed Lot 2 in order to comply with the intent of the NSW Rural Fire Service, **Planning for Bushfire Protection**, 2006 and AS3959-2009 Construction of Buildings in Bushfire Prone Areas, refer to **Appendix 5**.

6.0 CONCLUSION

It is considered that the proposed subdivision of Lot 424 DP 710381 Old Station Road, Hampton Hall is at risk of bushfire attack; however it is in our opinion that with the implementation of the bushfire threat reduction measures and consideration of the recommendations in this report, the bushfire risk is manageable for the proposed subdivision.

With the implementation of the recommendations of this report it is considered that it will be possible for the proposed subdivision to meet the applicable acceptable solutions as provided for in NSW Rural Fire Service, **Planning for Bushfire Protection**, 2006.

This report is however contingent upon the following assumptions and limitations.

Assumptions

- (i) For a satisfactory level of bushfire safety to be achieved regular inspection and testing of proposed measures, building elements and methods of construction, specifically nominated in this report, is essential and is assumed in the conclusion of this assessment.
- (ii) There are no re-vegetation plans in respect to hazard vegetation and therefore the assumed fuel loading will not alter.
- (iii) It is assumed that the building works will comply with the DTS provisions of the BCA including the relevant requirements of Australian Standard 3959 – 2009.
- (iv) Any future residential subdivision developments are constructed and maintained in accordance with the risk reduction strategy in this report.
- (v) The vegetation characteristics of the subject site and surrounding land remains unchanged from that observed at the time of inspection.
- (vi) The information contained in this report is based upon the information provided for review, refer to **Appendix 2** and **3**.

No responsibility is accepted for the accuracy of the information contained within the above plans.

Limitations

- (i) The data, methodologies, calculations and conclusions documented within this report specifically relate to the building and must not be used for any other purpose.
- (ii) A reassessment will be required to verify consistency with this assessment if there is building alterations and/or additions, change in use, or changes to the risk reduction strategy contained in this report.

7.0 REFERENCES

NSW Rural Fire Services, *Planning for Bushfire Protection*, 2006

AS 3959-2009, *Construction of Buildings in Bushfire Prone Areas*

Keith David 2004, Ocean *Shores to Desert Dunes, The Native Vegetation of New South Wales and the ACT*, Department of Environment and Conservation

NSW State Government, *Rural Fires Act*, 1997

Port Macquarie-Hastings Councils, *Bushfire Prone Land Mapping*

NSW Rural Fire Service, *Guideline for Bushfire Prone Land Mapping*, 2002

Australian Building Codes Board, *Building Code of Australia*, 2011

NSW Rural Fire Service – *Guideline for Bushfire Prone Land Mapping 2002*

Disclaimer

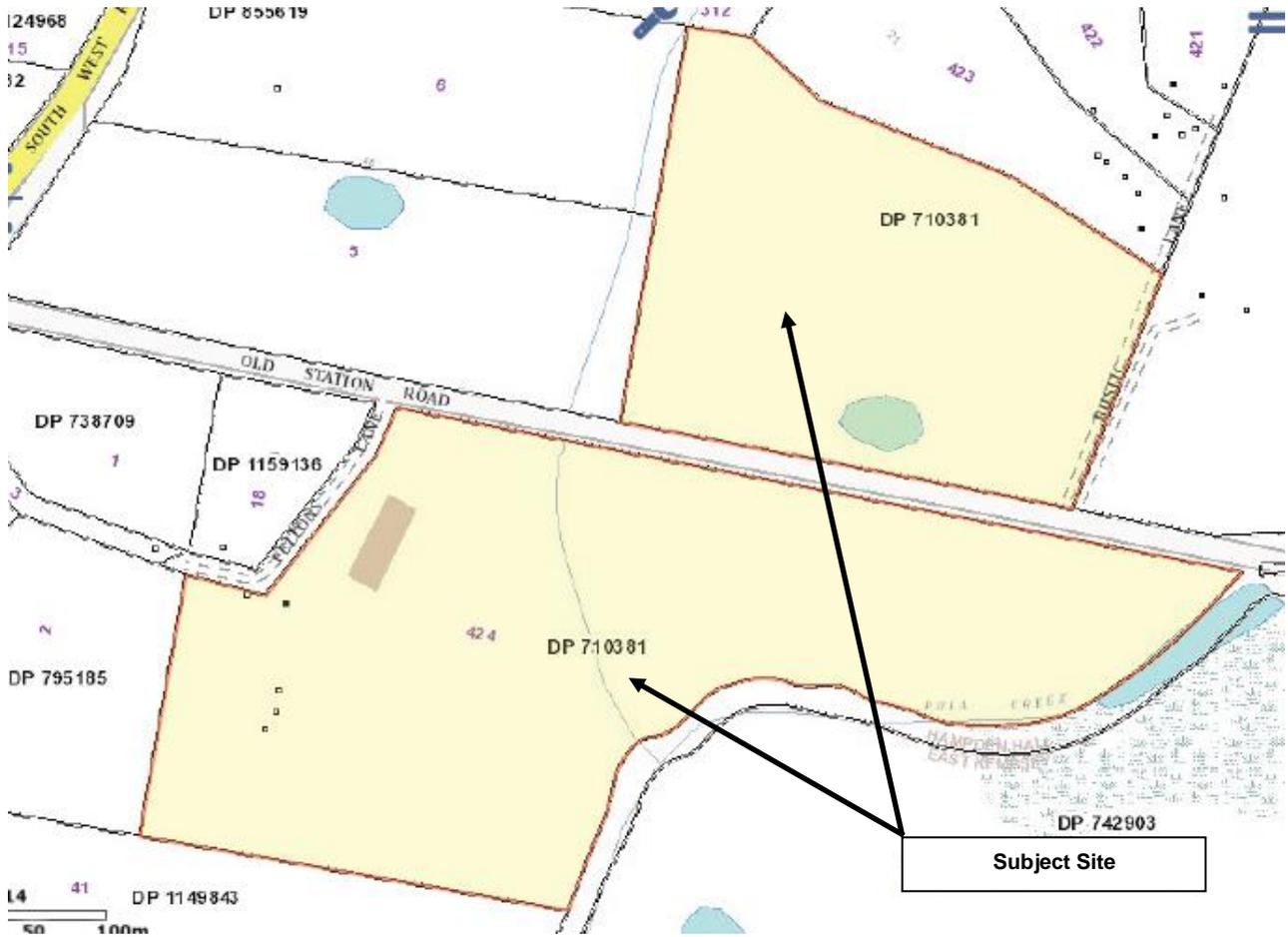
The findings referred to in this report are those which, in the opinion of the author, are required to meet the requirements of NSW Rural Fire Service, *Planning for Bushfire Protection*, 2006. It should be noted that the Local Authority having jurisdiction for the area in which the property is located may, within their statutory powers, require different, additional or alternative works/requirements to be carried out other than those referred to in this report.

This report has been prepared partially on information provided by the client. Information provided by the client in respect of details of construction.

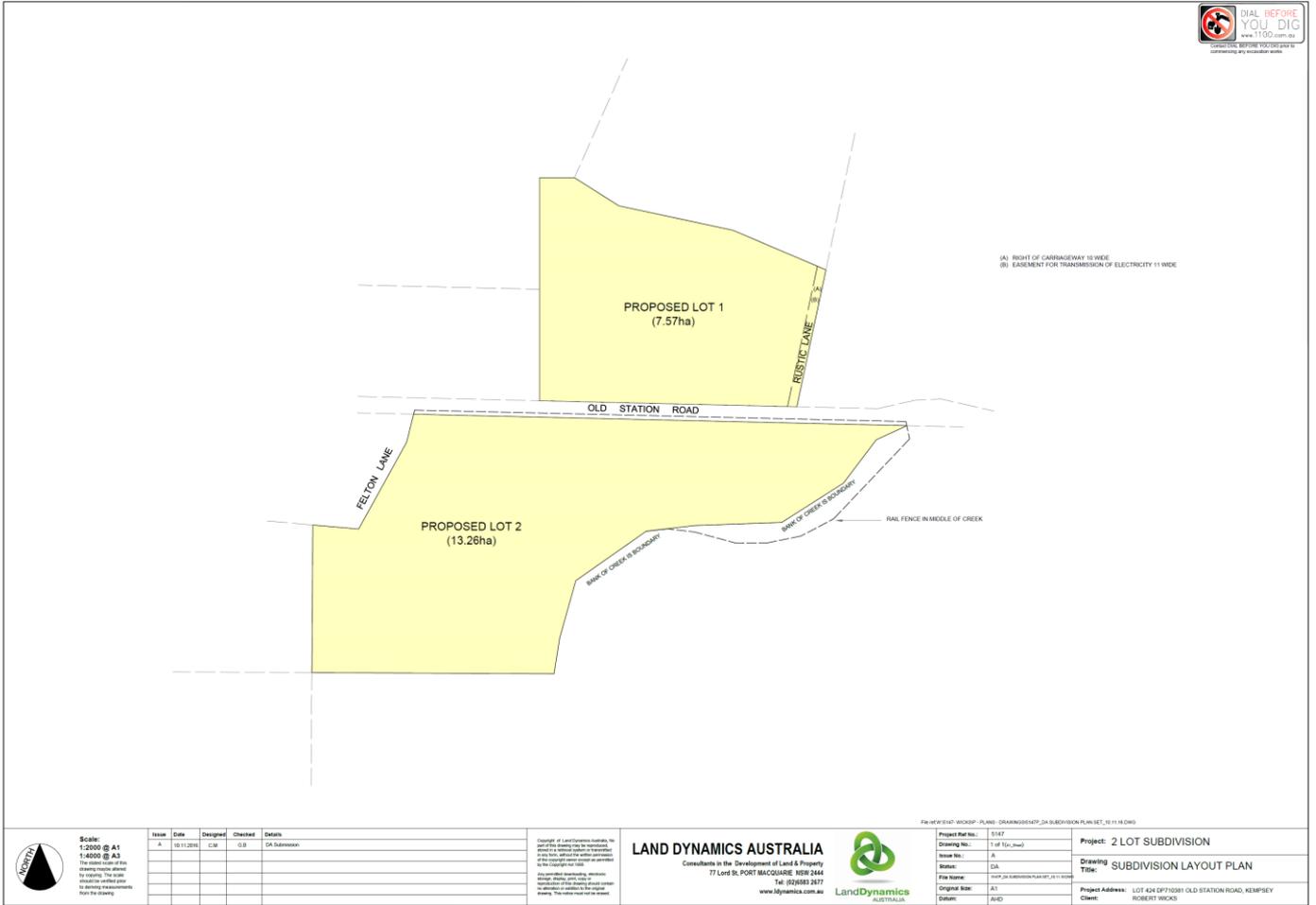
The author denies any legal liability for action taken as a consequence of the following:

- The Local Authority requiring alternative or additional requirements to those proposed or recommended in this report.
- Incorrect information, or mis-information, provided by the client with regard the proposed building which are in good faith included in the strategies proposed in this report and later found to be false.

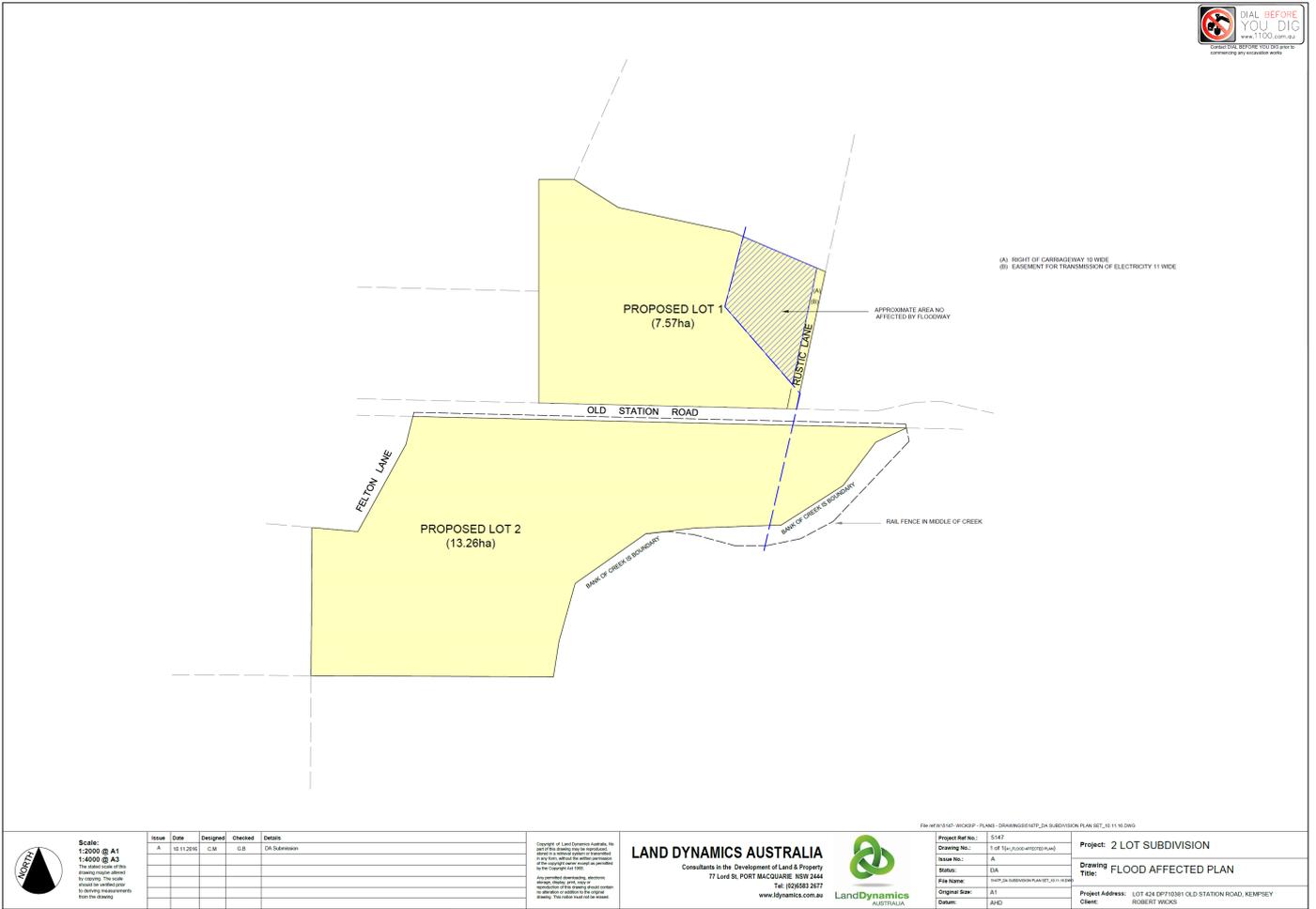
APPENDIX 1
Subject Lot



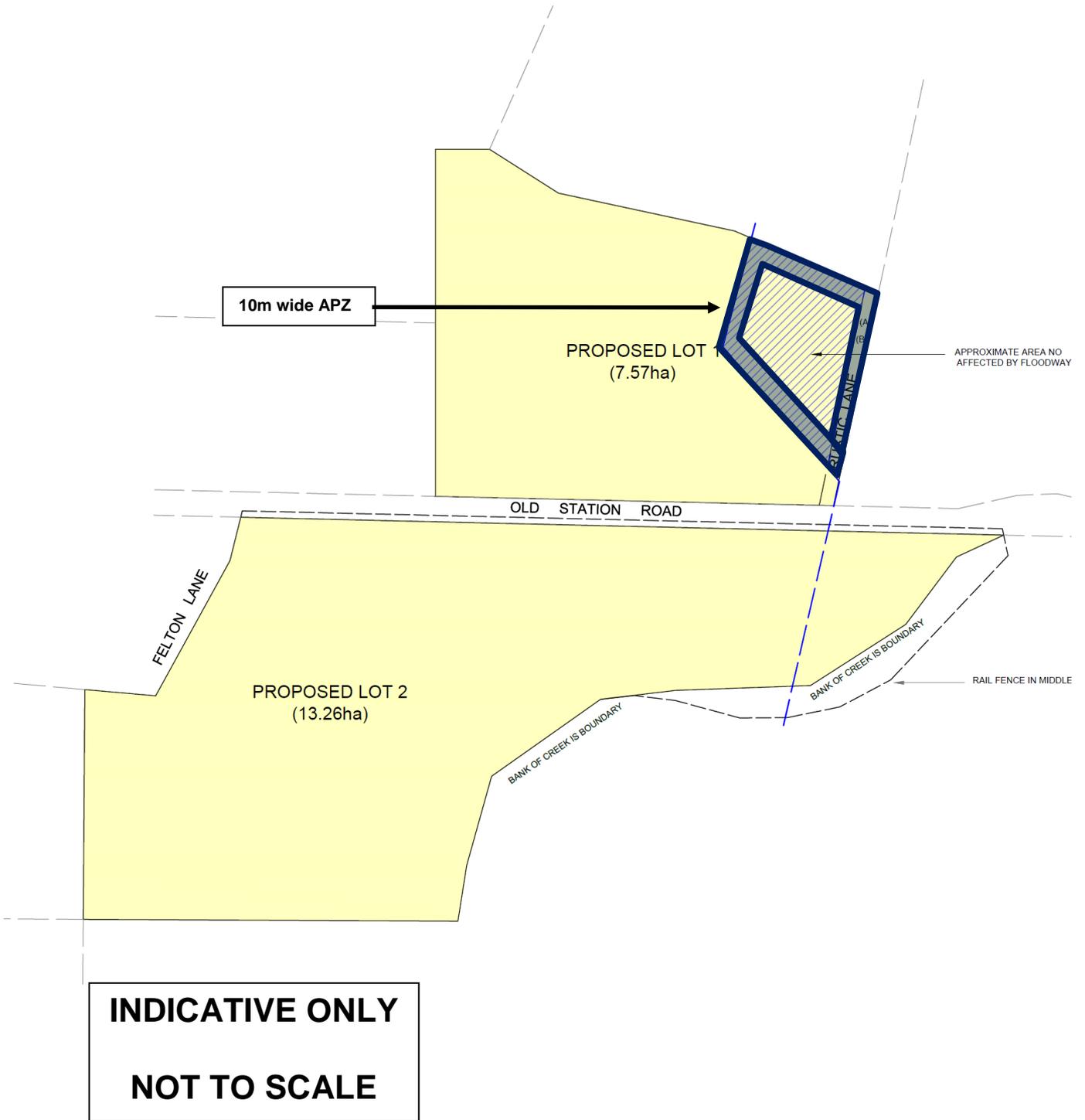
APPENDIX 2
Proposed Development

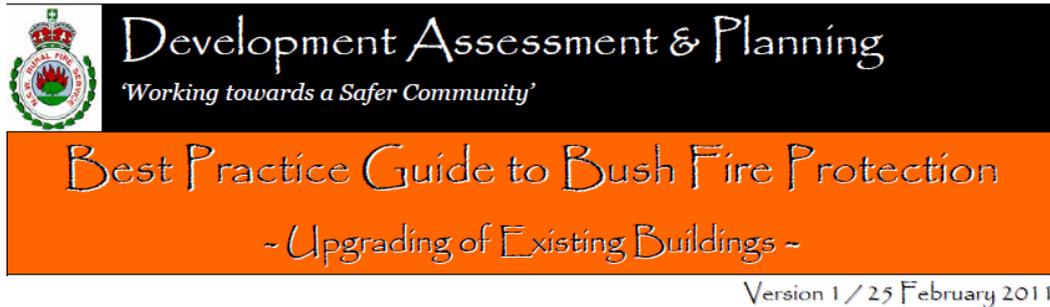


APPENDIX 3
Proposed Development – Flood Prone Land



APPENDIX 4
APZ Compliance Concept



APPENDIX 5**RFS Best Practice Guidelines – Dwelling Upgrades****INTRODUCTION**

Bush fire is a major challenge for the community. It has been a natural part of our landscape for thousands of years and remains an ever-present threat. Due to historic settlement patterns and the need to provide housing for people, development has occurred in areas that are bush fire prone placing lives and property at risk.

The NSW Rural Fire Service (RFS) has a statutory obligation to protect life, property and the environment through fire suppression and fire prevention. Improved land use planning and construction of buildings in bush fire prone areas are intrinsic to the fire management strategies of the RFS.

Through a working relationship with local Councils and the NSW Department of Planning, the RFS has been able to refine and implement bush fire protection for new developments through the NSW planning system. Since the introduction of these planning and building regulations in August 2002, all new development on bush fire prone land in NSW must comply with the requirements of *Planning for Bush Fire Protection 2006* and Australian Standard 3959-2009 – *Construction of buildings in bushfire-prone areas* (AS3959).

This means that people who are building or renovating have a clear direction on how to design and build their homes to be better protected from the impacts of bush fires. The types of protection measures include asset protection zones (vegetation management), access, landscaping, water supply, building design and construction. These measures assist building survival during a bush fire. They also contribute to the safety of fire-fighters and members of the community occupying buildings during the passage of a bush fire front.

Unfortunately, the majority of buildings in bush fire prone areas pre-date these regulations, meaning that most existing houses are at an increased risk of damage or loss from a bush fire.

With this in mind, the RFS has developed a practical guide for those living in bush fire prone areas who may wish to take the opportunity to upgrade their existing building to increase its resilience from bush fire attack.

The guide provides a range of options that homeowners may wish to consider in determining the level of protection appropriate for their circumstances and risk. These include minimal protection

1 of 6

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measures such as basic ember proofing, establishment of Asset Protection Zones (APZs) to higher level protection measures such as re-building or upgrading construction elements of the building.

While this guide identifies protection methods, it is vital that such building enhancements are considered in conjunction with any upgrade works undertaken, consideration of other bush fire protection measures such as maintenance of Asset Protection Zones, services and landscaping

The guide is not intended to be a comprehensive bush fire assessment of the risk to your property or an indication of compliance with *Planning for Bush Fire Protection 2006* and AS3959-2009. In this regard, home owners are advised to seek professional advice with regards to further upgrades or reconstruction to improve their resistance to bush fire attack.

For further assistance, details regarding suitably qualified consultants can be found on the RFS website www.rfs.nsw.gov.au

IS UPGRADING MANDATORY?

Upgrading of existing elements of the building to *Planning for Bush Fire Protection* is not mandatory. However, in the interests of achieving a better bush fire outcome, the RFS strongly recommends improvement of existing elements including upgrade of buildings.

Anyone whose land is bush fire prone should have regard to this document for practical guidance in protecting your property against bush fire attack. For all new developments on bush fire prone land, following the Development Application process or the Exempt and Complying Development process, the advice in this document should be applied as a minimum standard to the existing situation. This is in addition to any other bush fire protection measures that may be required by the development consent or complying development certificate.

These upgrading measures will contribute to making your home safer against the impact of the different elements of attack in the event of a bush fire; however, they form only part of the solution. Undertaking routine property maintenance and preparing a Bush Fire Survival Plan are other important parts to your bush fire protection and survival.

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UPGRADE PROVISIONS

85% of houses are lost from ember attack. The following provisions are designed to give existing buildings improved protection from ember attack during a bush fire event. Ember attack can occur over distances greater than 100 metres from the bush fire front. Any gaps, cracks or areas where embers and fuel can lodge (leaves, twigs, debris), significantly reduces a building's resistance to bush fire attack.

To mitigate against ember attack you should consider the minimal upgrades as detailed in the table below. Additional protection measures may also be considered and this will be dependent on the individual circumstances of the building commensurate with the level of threat from bush fire attack. The potential level of threat to the property from bush fire attack should also be taken in to account when deciding what level of protection should be used. Factors to be taken in to consideration include the isolation of the development and how easily you can react in the event of a bush fire.

Owners are cautioned that existing buildings may contain materials made from asbestos or have painted surfaces that contain lead. These materials should be handled in accordance with appropriate guidelines.

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BUILDING ELEMENT	MINIMAL PROTECTION MEASURES	ADDITIONAL PROTECTION MEASURES
GENERAL	Seal all gaps (>3mm) around the house (excluding subfloor) with: <ul style="list-style-type: none"> appropriate joining strips; flexible silicon based sealant; or mesh with a maximum aperture of 2mm, made from corrosion resistant steel, bronze or aluminium. 	Install a bush fire sprayer system. (Please contact a bush fire consultant or relevant industry expert to discuss options) Seal all gaps (>3mm) around the house (excluding subfloor) with: <ul style="list-style-type: none"> appropriate joining strips; flexible silicon based sealant; or mesh with a maximum aperture of 2mm, made from corrosion resistant steel, bronze or aluminium.
WALLS	Install sarking with a flammability index of not more than 5 behind weatherboards or other external cladding when they are being replaced for maintenance or other reasons.	Replace wall materials with non-combustible materials Install sarking with a flammability index of not more than 5 behind weatherboards or other external cladding.
SUBFLOOR	Removal of combustible materials and keeping areas clear and accessible.	Enclose subfloor with non-combustible material.
DOORS	Install weather strips, draught excluders or draught seals at the base of side-hung doors.	Replace external doors with non-combustible or solid timber doors with minimum thickness of 35mm. Replace or over-clad parts of door frames less than 400mm above the ground, decks and similar elements or fittings with non-combustible material. Install weather strips, draught excluders or draught seals at the base of side-hung doors.
VENTS & WEEPHOLES	Seal vents and weepholes in external walls with mesh (with an aperture size of 2 mm) of corrosion resistant steel, bronze or aluminium.	Seal vents and weepholes in external walls with mesh (with an aperture size of 2 mm) of corrosion resistant steel, bronze or aluminium.
ROOFS	Seal around roofing and roof penetrations with a non-combustible material. Install sarking with a flammability index of not more than 5 beneath existing roofing when it is being replaced for maintenance or other reasons. If installed, gutter and valley leaf guards shall be non-combustible.	Replace fascia and roof materials with non-combustible materials. Seal around roofing and roof penetrations with a non-combustible material. Install sarking with a flammability index of not more than 5 beneath existing roofing. If installed, gutter and valley leaf guards shall be non-combustible.
WINDOWS	Install mesh with a maximum aperture of 2mm, made from corrosion resistant steel, bronze or aluminium to all external doors and openable windows	Installing appropriately tested shutters to doors and windows; or Install mesh with a maximum aperture of 2mm, made from corrosion resistant steel, bronze or aluminium to all external doors and windows Replacing glass with toughened or laminated safety glass Replace overhead glazing with 'grade a' safety glass
EXTERNAL STRUCTURES		External structures to be located >10 metres from the main dwelling.
DECKING		Replace decking with non-combustible material

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OTHER REQUIREMENTS

ASSET PROTECTION ZONES

Development on bush fire prone land requires suitable separation from the bush fire hazard. This separation is referred to as an asset protection zone (APZ) and should be located wholly within the development property.

The APZ separates the building from the hazard. It is designed to minimize the presence of fuels, which could burn in a fire. Therefore, the impact of direct flame contact, radiant heat and ember attack on the development is reduced.

In order to ensure appropriate levels of safety, the RFS recommends that an APZ is always provided. Where a building has been newly developed or alterations and additions have been undertaken, recommended levels of construction are reliant upon the ongoing maintenance of the APZ. In this regard, the suitability of the design and construction of the building will be significantly compromised should the APZ not be maintained or implemented as intended.

APZ should be managed in accordance with section 4.1.3 and Appendix 5 of 'Planning for Bush Fire Protection 2006' and the NSW Rural Fire Service's document *Standards for asset protection zones*.

SERVICES

During major bush fire events, the preparedness of the dwelling and its occupants may be seriously jeopardised with the loss of basic services, particularly water and electricity.

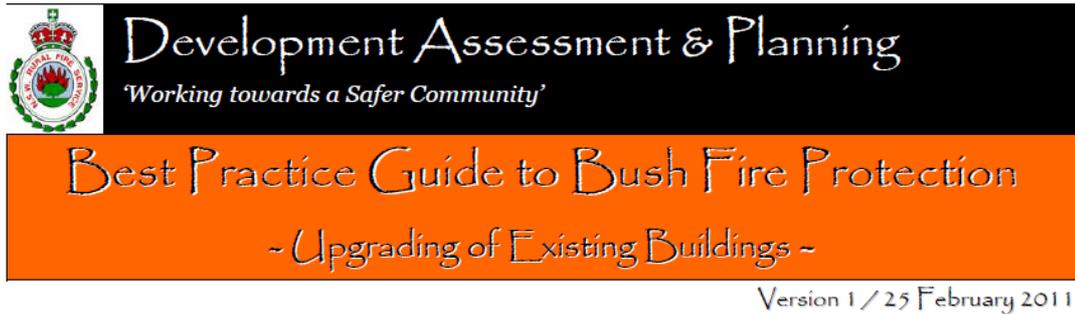
Adequate water supply is critical for any firefighting operation, particularly where property protection is envisaged. A reticulated water supply should be provided which is easily accessible and located at regular intervals. Where no reticulated water supply is available, a water supply of 5,000L reserve (i.e. water tank or dam) dedicated to firefighting purposes should be installed and maintained.

Electricity services should be located so that the possibility of ignition of the surrounding bushland or fabric of the buildings is limited. Regular inspection of the electricity lines should be undertaken to ensure they are not impacted by branches.

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The location of gas services should vent facing away and not lead to the ignition of surrounding bushland or the fabric of the buildings.

LANDSCAPING

Vegetation can burn during a bush fire. With this in mind, careful attention must be paid to species selection, their location relative to their flammability, avoidance of continuity of vegetation (horizontally and vertically), and ongoing maintenance to readily remove flammable fuels (leaf litter, twigs and debris).

Homeowners are advised to contact their local Council before undertaking any work that involves modifying or removing existing trees.

The following additional information relating to landscaping is available at www.rfs.nsw.gov.au:

1. Standards for Asset Protection Zones
2. Appendix 5 of *Planning for Bush Fire Protection 2006*

CONTACT US

For more information please visit www.rfs.nsw.gov.au or contact:

NSW Rural Fire Service - Development Assessment & Planning

Phone: 8741-5175

Email: development.assessment@rfs.nsw.gov.au

Fax: 8741-5433

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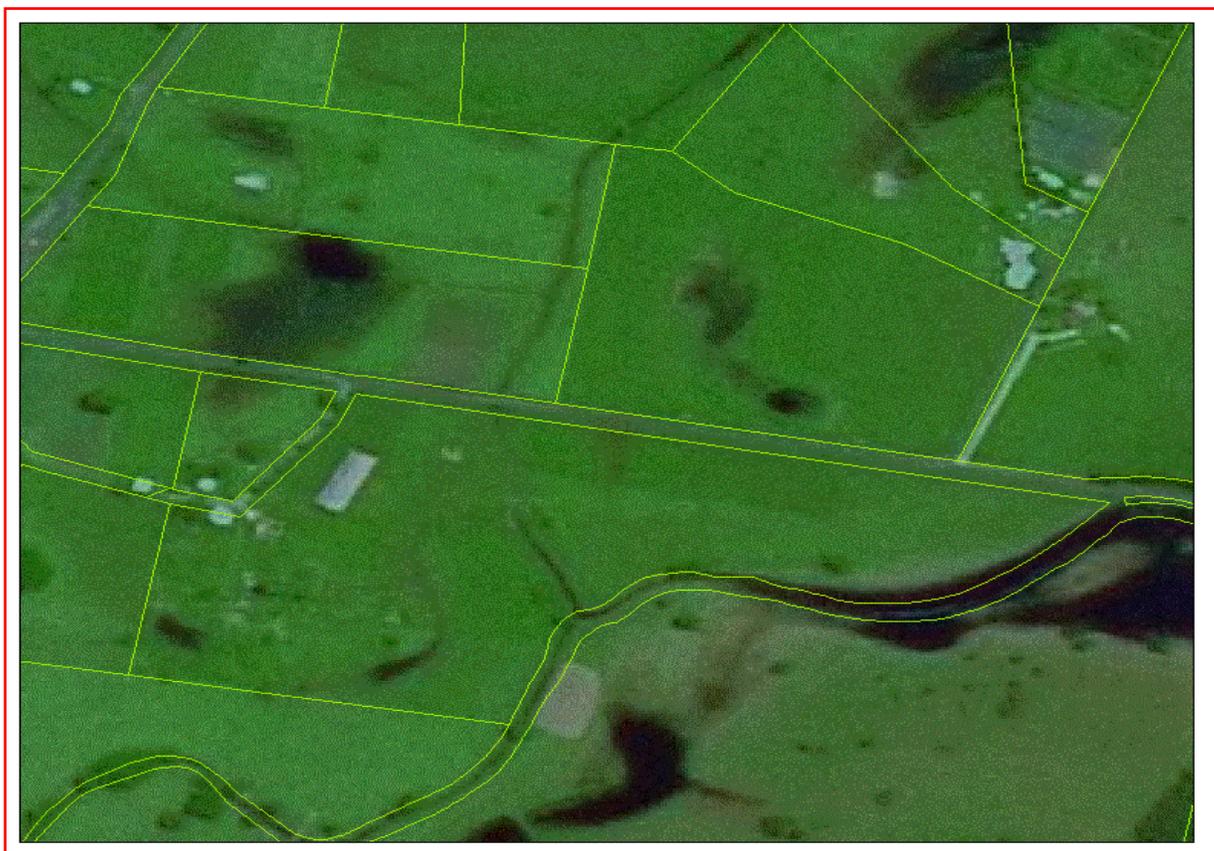
Land Dynamics Australia
77 Lord St
Port Macquarie New South Wales 2444
Attention: Donna Clarke
Email: donna.clarke@ldynamics.com.au

Date: 31 March 2017

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lot : 424, DP:DP710381 with a Buffer of 50 meters, conducted by Donna Clarke on 31 March 2017.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



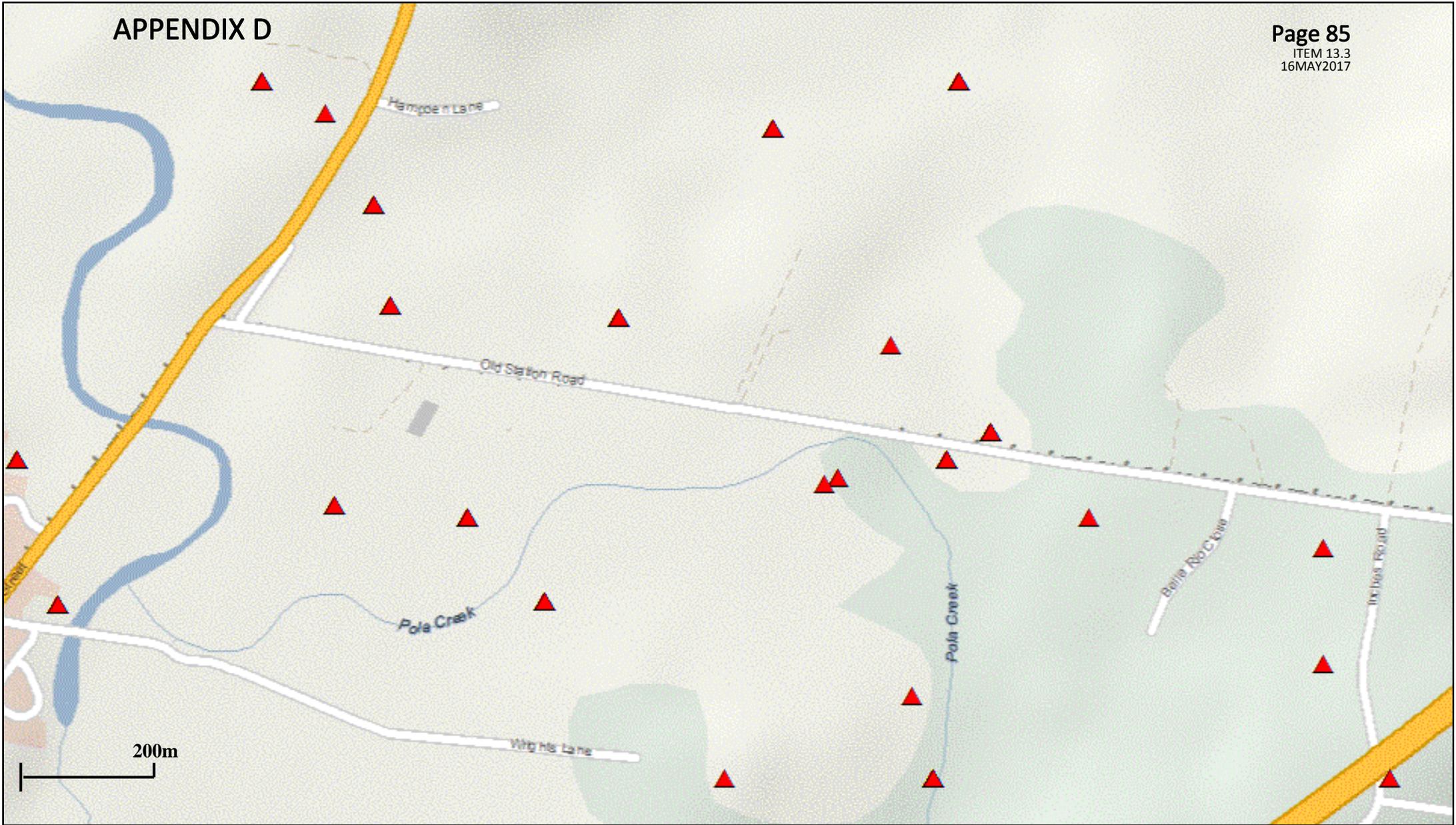
A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette \(http://www.nsw.gov.au/gazette\)](http://www.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date .Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.



Legend

-  Species records mapped as held
-  Category 3 sensitive spp. 0.01°(~1km) rounded
-  Category 2 sensitive spp.0.1°(~10km) rounded

Atlas of NSW Wildlife records



Data from the BioNet Atlas of NSW Wildlife website, which holds records from a number of custodians. Location accuracy varies. Maps from the website are interactive: map displays can be modified from the original extent and a maximum of 5 species can be selected to display. Map may contain errors and omissions. Neither the Office of Environment and Heritage nor any other data custodian will accept liability for any loss, damage, cost or expenses incurred as a result of the use of, or reliance upon, the information in the map. Map copyright the State of NSW through the Office of Environment and Heritage.

Your Selection: Public Report of all Valid Records of Entities in selected area [North: -31.02 West: 152.81 East: 152.91 South: -31.12] returned a total of 5,392 records of 814 species.

Report generated on 24/04/2017 9:06 AM



ROSEWOOD ENVIRONMENTAL SERVICES PTY LTD

PO Box 129
WAUCHOPE NSW 2446

ON-SITE DOMESTIC-WASTEWATER MANAGEMENT REPORT

DATE: 19.4.17

REPORT #: E2475

CLIENT DETAILS:

- **NAME:** Robert & Donna Wicks
- **POSTAL ADDRESS:** C/O Land Dynamics P/L
PO Box 2459
Port Macquarie
NSW 2444
- **PROJECT ADDRESS:** Proposed 2 Lot Subdivision of
Lot 424 DP710381
15 Felton Lane
Hampden Hall NSW

Dear Mr & Mrs Wicks,

At your request, Rosewood Environmental Services Pty Ltd carried out a site and soil evaluation at 15 Felton Lane, Hampden Hall on the 19th April, 2017. This information has been assessed to determine the suitability of the proposed Lot 1 (Rustic Lane, north side of Old Station Road) to sustain an on-site wastewater treatment system. An existing dwelling is located on the proposed Lot 2 (Felton Lane, south side of Old Station Road) and no report was required.

The proposed residence for Lot 2 will have 4 bedrooms (maximum 6 persons). The water supply is town water. The Wastewater Treatment Unit option for the dwelling, based on the site & soil assessments and client preference is a septic tank & Evapotranspiration-absorption Trenches.

The guidelines and Standards used for this report are:

- AS/NZS 1547:2000 & 2012 On-site Domestic-Wastewater Management.
- AS 1547: 1994 Disposal Systems for Effluent from Domestic Premises.
- Environment & Health Protection Guidelines: On-site Sewerage Management for Single Households.
- Local Council Code.

NOTE: The information contained within this report is for wastewater purposes only and must not be used for any other purpose (especially Construction, Footing Designs, etc) as it is not considered relevant.

Thank you for using Rosewood Environmental Services Pty Ltd and if we can be of further assistance please feel free to call and discuss any of the following results that you may have queries about.

Yours Sincerely

Lyn Richardson

LYN RICHARDSON

ROSEWOOD ENVIRONMENTAL SERVICES PTY LTD

Phone: 02 65 853 143

ABN 13 104 186 441
Fax: 02 65 853 145
Email: rosewoodenviro@bigpond.com

Mobile: 0428 853 143

ROSEWOOD ENVIRONMENTAL SERVICES PTY LTD**CONTENTS PAGE**

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ROSEWOOD ENVIRONMENTAL SERVICES PTY LTD**SECTION 1**
GENERAL INFORMATION**1.1 LOCATION DETAILS****1.1.1 Locality.**

The property is located at Hampden Hall, east of Kempsey on the NSW Mid North Coast

1.1.2 Owner.

Robert & Donna Wicks own the property and will be the residents of the dwelling.

1.1.3 Project Address.

Lot 424 DP710381 Lot 15 Felton Lane, Hampden Hall

1.1.4 Phone number.

Land Dynamics - 0265832677

1.1.5 Local Government.

Kempsey Shire Council

1.2 DAILY FLOW RATE**1.2.1 Intended Water Supply**

The water supply to the residence is town water.

1.2.2 Source of Wastewater

Source is from all waste (Black & Grey water combined).

1.2.3 Typical wastewater flow allowance.

(AS1547:2012 APPENDIX H)

(150L/person/day) Standard water reduction fixtures

1.2.4 Total capacity of dwelling.

4 Bedrooms = 6 persons

1.2.5 Total Daily Wastewater Flow Rate.

6 persons = 900L/household/day (Standard water reduction fixtures)

1.3 CLIMATE INFORMATION

SOURCE: Data Drill

Location of Precipitation data: Kempsey

Location of Evaporation data: Kempsey

ROSEWOOD ENVIRONMENTAL SERVICES PTY LTD

SECTION 2
SITE & SOIL EVALUATION

2.1 SITE EVALUATION

2.1.1 Site Plan (As per AS/NZS 1547:2012 Figure D1)

See APPENDIX A

2.1.2 Site Evaluator(s) (As per AS/NZS 1547:2012)

The principal evaluator: Lyn Richardson

Technician: Kevin Richardson

2.1.3 Site Assessment Table

(As per AS/NZS 1547:2012-Table D1 /E & HP Guidelines Table 4/Local Council Code)

FEATURES	DESCRIPTION	LIMITATION CATEGORY (Minor/ Moderate/Major)
Flood Potential	>1:100 (8.4mAHD) >1:20 FL (8.09m AHD)	Minor Minor
Aspect (Compass)	West	Minor
Exposure	Full sun/Prevailing winds	Minor
Slope (%) (Inclinometer)	~3%	Minor
Landform	Hillslope	Minor
Upslope Seepage	Possible	Moderate
Run-on	Possible	Moderate
Erosion Potential	High	Moderate
Site Drainage	Good	Minor
Fill	Not detected	Minor
Groundwater	Not detected	Minor
Buffer Distances	See Below	Minor
Sufficient Land	Yes	Minor
Surface Rocks	<10%	Minor
Acid Sulfate Soil	CLASS 5	Minor

DESCRIPTION	ALLOWABLE MINIMUM (m)		AVAILABLE DISTANCE (m)
	Septic system	Secondary Treated	
Boundaries - up slope	6	3	6
- down slope	12	6	12
Waterways - Permanent	100		100
- Seasonal	40		40
Well / bores	250		250
Gully /dam	40		40
Buildings - up slope	6	3	6
- down slope	12	6	12
Driveways - up slope	6	3	6
- down slope	12	6	12
Swimming pool - up slope	6	3	6
- down slope	12	6	12
Other -	-	-	-

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2.1.4 Site Limitations

(As per AS/NZS1547:2012/E & HP Guidelines Table 4/Local Council Code)

There are no major site limitations

The moderate site limitations are:

- Run on & seepage is possible
- Erosion potential high if not vegetated

2.1.5 Site Remediations

(As per AS/NZS 1547:2012 /E & HP Guidelines Table 4)

- 1) All land application systems should be constructed on the contour so area of disposal system is level.
- 2) All depressions are to be filled in to avoid pooling.
- 3) The area must be vegetated immediately after installation to avoid erosion.
- 4) A cut off drain and a diversion mound are required above the disposal area to reduce the risk of seepage and run-on from higher ground.
- 5) The assessed area is within a CLASS 5 Acid Sulfate soil risk zone - *Works by which the watertable is likely to be lowered to below 1 metre AHD in adjacent Class 1, 2, 3 or 4 land.* Earthworks are not expected to be >1m or lower watertable.

ROSEWOOD ENVIRONMENTAL SERVICES PTY LTD

2.2 SOIL EVALUATION

2.2.1 Soil Profile Information (As per AS/NZS 1547:2012)

Test Pit	Soil Horizon Depths (mm)	Texture	Colour	Organic Matter (OM) Fill(F) Natural Ground (NG)	Gravel/Cobbles	Moisture Content	Structure	Consistency
			(P) = Pale (D) = Dark (/) = Mottled (-) = combination		Low (L) <10%> Moderate (M) <25%> High (H)			
1	0-150	Topsoil	(D)Brown	OM/NG	L	M	St	S
	150-550	Clay LOAM	Brown	NG	L	M	St	St
	550-900	Light CLAY	Orange	NG	L	M	St	St
	900-1000	Medium CLAY	Grey/Orange	NG	L	M	St	VSt
2	0-100	Topsoil	Black	OM/NG	L	M	St	S
	100-500	Light CLAY	Orange	NG	L	M	St	St
	500-800	Medium CLAY	Red/Orange	NG	L	M	St	St
	800-1000	Heavy CLAY	Red/Grey	NG	L	M	St	VSt
3	0-150	Topsoil	(D)Brown	OM/NG	L	M	St	S
	150-550	Clay LOAM	Brown	NG	L	M	St	St
	550-900	Light CLAY	Orange	NG	L	M	St	St
	900-1000	Medium CLAY	Grey/Orange	NG	L	M	St	VSt
4	0-150	Topsoil	(D)Brown	OM/NG	L	M	St	S
	150-600	Clay LOAM	Brown	NG	L	M	St	St
	600-900	Light CLAY	Orange	NG	L	M	St	St
	900-1000	Medium CLAY	Grey/Orange	NG	L	M	St	VSt

NOTE: CONSISTENCY TERMS.

COHESIVE SOILS	Very Soft (VS) ≤12 kPa	Soft (S) >12 ≤25 kPa	Firm (F) >25 ≤50 kPa	Stiff (St) >50 ≤100 kPa	Very Stiff (VSt) >100 ≤200 kPa	Hard (H) >200 kPa
NON-COHESIVE SOILS	Very Loose (VL) ≤15 kPa	Loose (L) >15 ≤35 kPa	Medium Dense (MD) >35 ≤65 kPa	Dense (D) >65 ≤85 kPa	Very Dense (VD) >85 kPa	-

2.2.2 Soil Assessment Table (As per AS/NZS 1547:2012/E & HP Guidelines Table 6/Local Council Code)

TESTPITS	1-3	Limitation Category ¹ (Minor/Moderate/Major)
Soil Structure ²	Strong	Minor
Soil Texture ³	Light-Medium Clay	Minor
Soil Permeability Category ⁴	5	Minor
Indicative Permeability (K _{sat}) (m/day) ⁴	0.06	Minor
Recommended DLR (mm/day) ⁵ ETA	8	Minor
Recommended DIR(Irrigation area) (mm/week) ⁶	NA	Minor
Course Fragments (%>2mm) ⁷	0-20	Minor
Depth to bedrock/hardpan (mm)	>1m	Minor
Depth to Episodic/seasonal watertable	>1m	Minor
pH (1:5 water)	5.1	Minor
Electrical Conductivity (dS/m)	<4	Minor
Dispersiveness (Modified Emerson Class) ⁸	3	Minor

SOURCES:

- 1) "Environmental & Health Protection Guidelines" Section 4-Table 6 page 68 & AS/NZS 1547-2012
- 2) AS/NZS 1547-2012 (Table E4 – Assessment of Soil Structure)
- 3) AS/NZS 1547-2012 (Table E1 – Assessment of Soil Texture)
- 4) AS/NZS 1547-2012 (Table E1) - Based on soil texture result.
- 5) AS/NZS 1547-2012 (Table L1– trenches and beds) or Table N1- Mound).
- 6) AS/NZS 1547-2012 (Table M1 – Irrigation systems).
- 7) AS/NZS 1547-2012 (Table E.2 –Abundance of Course Fragments) & (Table E3 –Size of Course Fragments)
- 8) "Environmental & Health Protection Guidelines" Section 4-Table 6 page 68 Modified Emerson Aggregate Test Classifications are incorrect and the classification used is as per AS 1289.3.8.1 and AS/NZS 1547-2012-Clause E7.

ROSEWOOD ENVIRONMENTAL SERVICES PTY LTD**2.2.3 Soil Limitations**

(As per AS/NZS 1547:2012/E & HP Guidelines Table 6/Local Council Code)

There are no major or moderate soil limitations

2.2.4 Soil Remediations

(As per AS/NZS 1547:2012 /E & HP Guidelines Table 6)

- 1) Based on the above limitations and client preference, the chosen system for this property is a septic tank and ETA trenches.

ROSEWOOD ENVIRONMENTAL SERVICES PTY LTD**SECTION 3**
DESIGN REPORT**3.1 WASTEWATER TREATMENT UNIT & LAND APPLICATION SYSTEM****3.1.1 Options suitable for site. (As per AS/NZS 1547:2012 APPENDIX 4.2A&B)**

OPTION	WASTEWATER TREATMENT UNIT	LAND APPLICATION
1	SEPTIC TANK	EVAPOTRANSPIRATION ABSORPTION TRENCHES

3.1.2 Size of area required

(Calculations as per AS1547:2012, E & HP guidelines, AS 1547:1994)

OPTION	Dimensions	6 person HOUSE
1	Trench Width Trench Depth Total Trench Length Suggested trenches Spacing between trenches	1000mm 600mm 100m total 4 x 25m trenches 1.0m

3.1.3 Siting of system

The area to the north west of the house site has been assessed for the land application area.

The land application area can be located anywhere within the assessed area.

3.2 WASTEWATER TREATMENT UNIT**3.2.2 Capacity of Unit Options**

(As per Manufacturers recommendations)

OPTION 1

➤ SEPTIC TANK CAPACITY = All Wastes = **3000L min.**

Evapotranspiration trenches after septic tank. An outlet filter be installed into the septic tank outlet is also required.

3.2.3 Effluent Quality

(As per AS/NZS 1547:2012)

The quality of the wastewater from option 1 will be to a primary level.

ROSEWOOD ENVIRONMENTAL SERVICES PTY LTD**SECTION 4**
CONSTRUCTION & INSTALLATION
(AS PER AS/NZS 1547:2012 - N3)**4.1 CONSTRUCTION REQUIREMENTS*****4.1.1.1 Evapotranspiration Trenches.***

- As per AS/NZS1547-2000 Figure 4.5A5 Conventional bed OR Self supporting arch Trench.
- A cut off drain and diversion mound above the application area to divert surface and seepage water away is required.

4.1.2 Wastewater treatment units.

- AS/NZS 1546.1 & AS/NZS1547-2012.

4.2 INSTALLATION**4.2.1 Installation Requirements** (As per AS/NZS 1547:2012)**4.2.2 Installation Instructions** (As per AS/NZS 1547:2012)**4.2.2.1 Instructions** (As per AS/NZS 1547:2012)**4.2.2.2 Repairs** (As per AS/NZS 1547:2012)**4.3 COMMISSION & INSPECTION** (As per AS/NZS 1547:2012)

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SECTION 5 CONCLUSION

5.1 REPORT SUMMARY

- The site where the proposed and reserve land application areas are to be located has 1 main system design option available, under the guidelines and client preference:-
 - ❑ A septic tank with evapotranspiration trenches
- Site and soil remediation involves:-
 - ❑ The area is immediately vegetated after installation to reduce erosion potential.
 - ❑ All depressions are to be filled in to avoid pooling.
 - ❑ The assessed area is within a CLASS 5 Acid Sulfate soil risk zone - *Works by which the watertable is likely to be lowered to below 1 metre AHD in adjacent Class 1, 2, 3 or 4 land.* Earthworks are not expected to be >1m or lower watertable.
 - ❑ Standard AAA Water saving devices are to be installed if not already.
 - ❑ A final plan should be completed by the installer at the conclusion of the project for Council's and client's reference.
 - ❑ The long-term sustainability of the system relies on the occupier of the dwelling caring for their system. Appendix C provides information regarding the operation and maintenance of the system, which will greatly assist in prolonged performance.

5.2 DISCLAIMER

Results and recommendations in this report are based on the information supplied by the client and conditions present at the time of testing. Any changes affecting the proposed land application area or alternate land application area will require a review of this report.

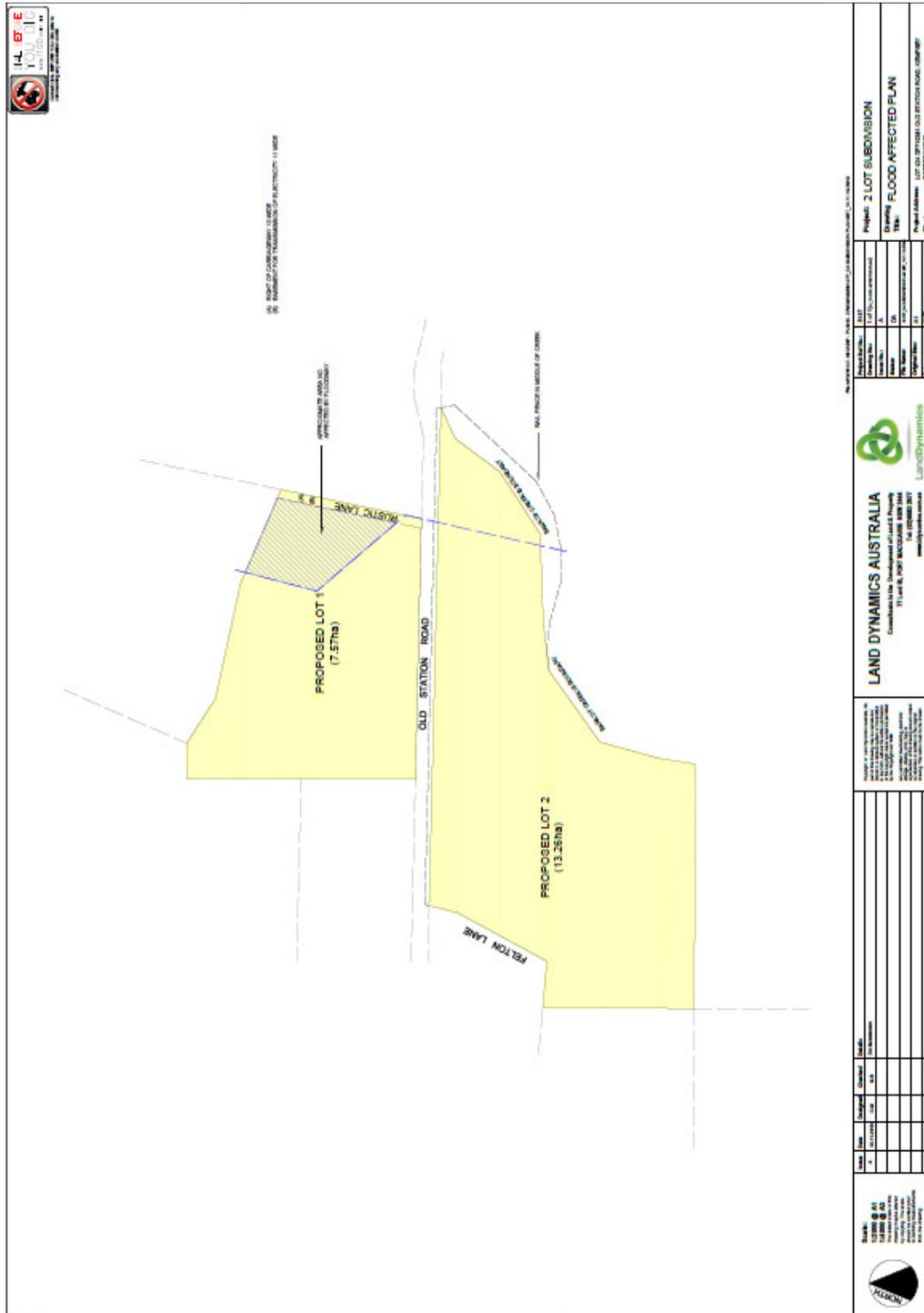
5.3 REPORT CONDITIONS

- This report remains the property of "Rosewood Environmental Services Pty Ltd" and we reserve the right to withdraw this report at any stage until all payments have been received in full.
- This report is not to be copied except in full (exempting Appendices relating to general Maintenance/operations and Plantings).
- This report is not to be used for any property or persons other than those specified within the report, otherwise this may lead to a breach of copyright.
- NOTE: The information contained within this report is for wastewater purposes only and must not be used for any other purpose (especially Construction, Footing Designs, etc) as it is not considered relevant.

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APPENDIX A
Property Plan

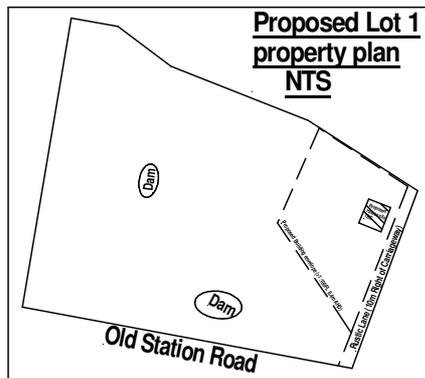
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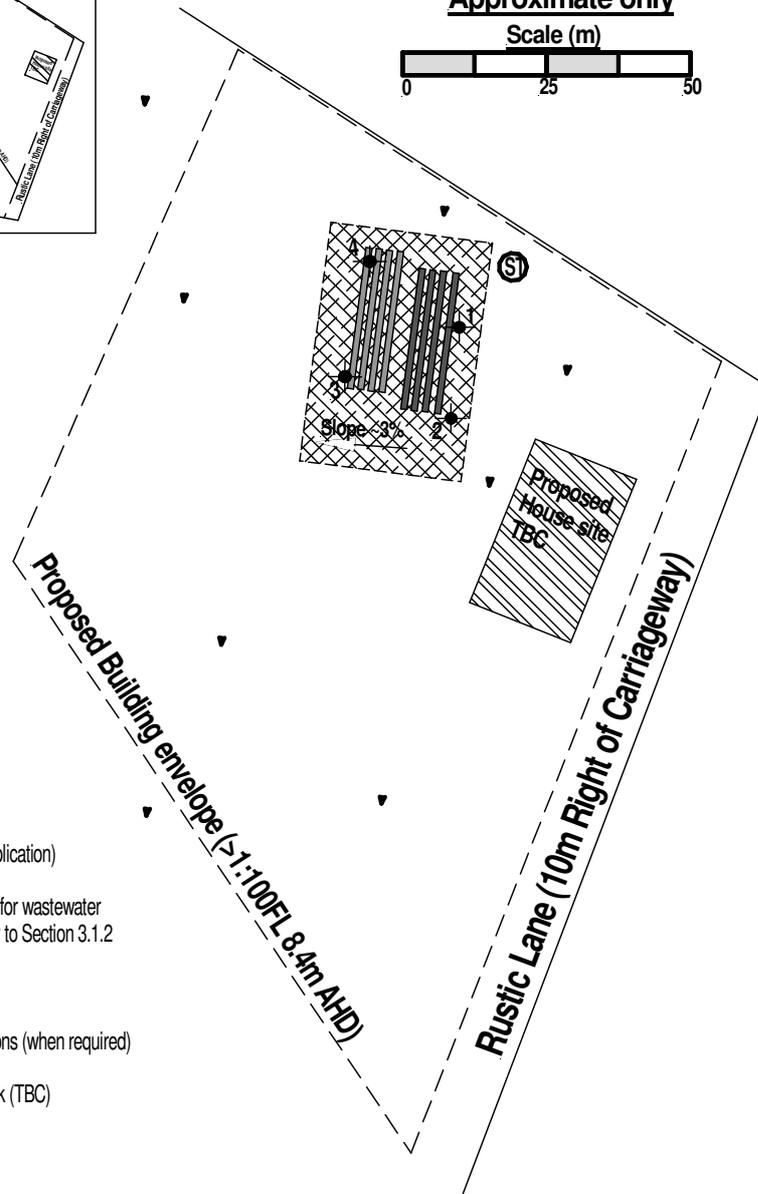
APPENDIX A
Site Plan

NTS in pdf



Approximate only

Scale (m)



KEY:

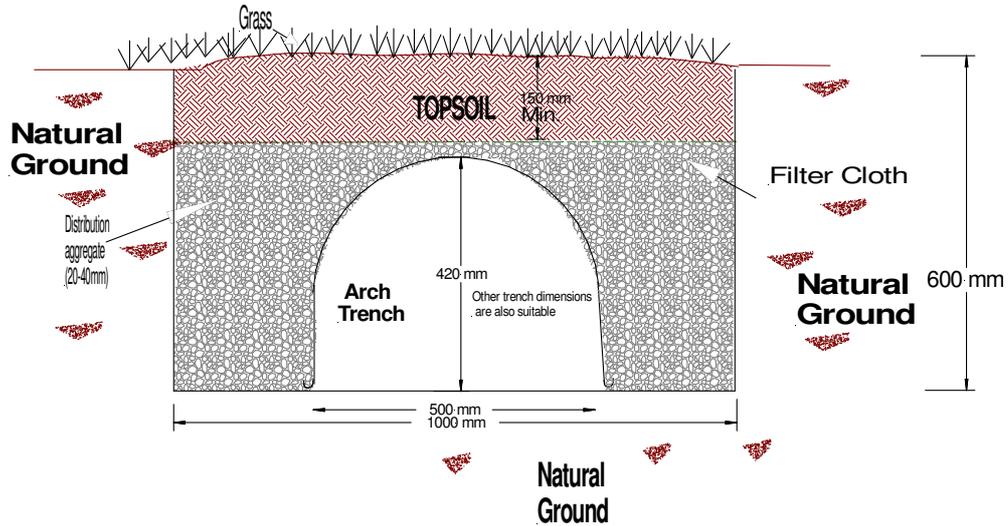
- = Testpit locations
- = Buffer distances
(Not to be used for wastewater application)
- = Proposed Land Application Area for wastewater (~1185m²) For required area refer to Section 3.1.2
- = Suggested trench locations
- = Suggested reserve trench locations (when required)
- = Suggested location of Septic tank (TBC)

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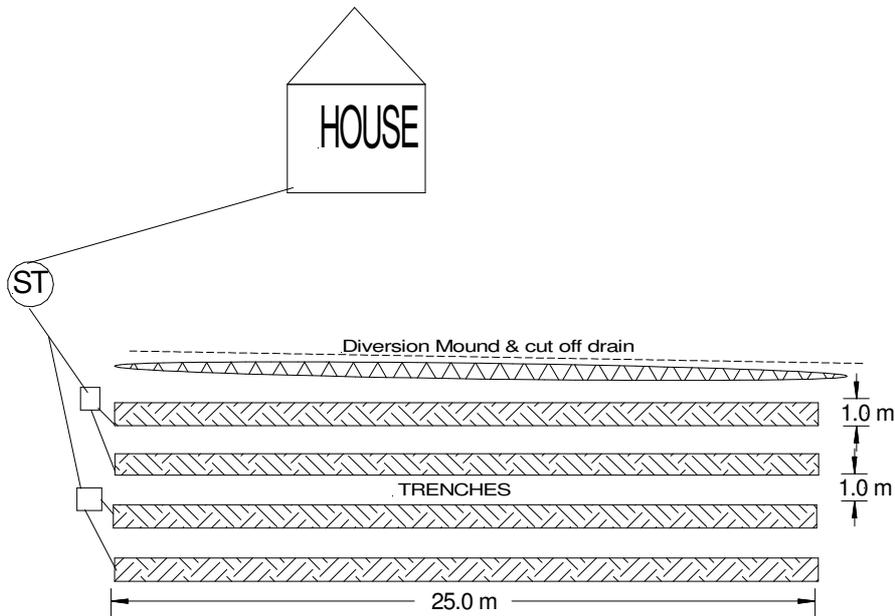
APPENDIX B

SELF-SUPPORTING ARCH TRENCH

Source: AS/NZS 1547:2000 (Fig. 4.5A2)



TRENCHES
(Diagrammatic only)



ROSEWOOD ENVIRONMENTAL SERVICES PTY LTD**APPENDIX C**
OPERATION & MAINTENANCE INFORMATION
(As per AS/NZS 1547:2012 APPENDIX T)➤ **General.**

Long-term sustainability of the on-site wastewater system will depend on the Operation and Maintenance (O & M) management procedures that the user undertakes. Regular O & M in the form of understanding the basic mechanics of the system, so that the system can function properly through the correct use and care by the user, is essential. A systematic monitoring program is also required to reduce the risk of failure and inefficiency.

➤ **O & M Guidelines.**

The O & M guidelines for the wastewater treatment system should be supplied by the manufacturers of the system in question.

A copy of these guidelines should be kept in an accessible location and made available to any person that is involved with the specific system ie. Home owners, tenants/occupiers, and on change of ownership or tenancy.

➤ **Monitoring.**

- All systems should be monitored to ensure they are complying with regulations.
- Frequency should take into consideration:
 - Age of system;
 - Experience with other on-site system performances;
 - Recent history of poor maintenance on site or similar site;
 - Approval conditions;
 - Type of system.
- A regular schedule for maintenance checks on individual on-site wastewater systems should be organised. These checks should be carried out by an accredited organisation and a "Maintenance Certificate" should be issued.
- Record sheets should be filled out for every maintenance check or action carried out on the system. They should be available to any agency or local regulatory authority who need to certify that the system is being operated and maintained properly. The report sheets should be kept for at least 10 years.
- "Maintenance Certificates" should be kept for at least 10 years. The owner and/or occupier are responsible for commissioning the maintenance check and carrying out any remedial works as recommended by the "Maintenance Certificate"., and paying any costs involved. The "Maintenance Certificate" should include:
 - Certification by a qualified and experienced person that the wastewater system is operating and performing effectively.
 - Specific O & M attention due.
 - Identification of any O & M problems, their likely cause and recommended remedial action.
 - Any evidence of system capacity being exceeded.
 - Results of effluent quality testing where secondary treatment is being used.
 - Actions and results, achieved following recommendations for remedial work after previous routine inspections, are noted.
 - Desludging time frame recommended.
 - Other relevant matters.
- Maintaining records, certificates and guidelines are the responsibility of the home owner or occupier.
- Registration of on-site wastewater system is to keep track of change of ownership, change in size and use of premises or demolition of premises.
- All persons carrying out O & M activities should ensure that, at all times, precautions are taken to protect their own health and the health of all other people at risk from the activity.

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APPENDIX C (cont.)
OPERATION & MAINTENANCE INFORMATION
(As per AS/NZS 1547:2012 APPENDIX T)

➤ **O & M Requirements.**• **Advice on use of the system.**

- Reduce sludge build up in tank:
 - 1) Scrape all dishes to remove fats, grease, etc. before washing.
 - 2) Keep all possible solids out of the system.
 - 3) Don't use a garbage grinder unless system has been specially designed to carry the extra load. Note: Conventional septic tanks are not designed for this purpose and this report has not been designed for one.
 - 4) Don't put sanitary napkins and other hygiene products into the system.
- Keep bacteria active in tank and land application area:
 - 1) Use biodegradable, low phosphorous soaps and detergents.
 - 2) Use a low-sodium detergent in dispersive soil areas.
 - 3) Use detergents in recommended quantities.
 - 4) Use liquid detergents in preference to powders.
 - 5) Don't use powerful bleaches, whiteners, nappy soakers, spot removers and disinfectants.
 - 6) Don't put chemicals or paint down the drain.
- Water conservation measures to promote sustainability and performance:
 - 1) Install water saving devices such as shower roses.
 - 2) Take showers rather than baths.
 - 3) Wash clothes only when there is a full load.
 - 4) Only use dishwasher when there is a full load.
- Avoid overloading the system by spacing out water use as evenly as possible.
 - 1) Don't do washing all on one day.
 - 2) Don't run dishwasher and washing machine at the same time.

• **Advice on maintenance.**

- Primary wastewater-treatment unit (septic tank)
 - 1) Desludge regularly ie every 3-5 years or when scum and sludge occupy 1/3 of the volume of the tank (or first stage of a two-stage system).
 - 2) Protect from vehicles.
 - 3) Clean grease trap, if any, out regularly.
 - 4) The vent and/or access cover of tank kept exposed.
 - 5) Have any outlet filter inspected and cleaned.
- The land-application area needs protection as follows:
 - 1) Land application areas are not play areas for children and access should be restricted.
 - 2) No vehicles or stock allowed on land application areas.
 - 3) Deep rooting plants should not be grown near absorption trenches or pipes.
 - 4) The diversion drains above the area should be kept clean.
 - 5) Baffles and valves in distribution box should be periodically (monthly or seasonally) changed to direct effluent into alternative trenches or beds, as required by the design.

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- Plants
Evapo-transpiration and irrigation areas should have their grass mowed and plants maintained to ensure that these areas take up nutrients with maximum efficiency.
 - Signs
Spray irrigation areas require appropriate warning signs that are always visible to persons undertaking activities near an irrigation area.
 - Equipment
 - 1) Follow the manufacturer's instructions for maintaining and cleaning pumps, siphons and septic tank filters.
 - 2) Clean discs filters or filter screens on irrigation-dosing equipment periodically by rinsing back into the primary wastewater-treatment unit.
 - 3) Flush drip irrigation lines periodically to scour out any accumulated sediment.
- **Advice on operating problems.**
 - Warning signs:
 - 1) Absorption field is wet or soggy with wastewater ponding on the surface of the ground.
 - 2) Smells of "Sewage" near the septic tank or absorption area.
 - 3) The drains and toilet run slowly.
 - 4) The grease trap is full or blocked.
 - **Advice on consequences of failure.**
 - Serious health and environmental hazards:
 - 1) Spread of infectious diseases.
 - 2) Breeding of mosquitoes and attraction of flies and rodents.
 - 3) Nuisance and unpleasantness.
 - 4) Pollution and infection of waterways, beaches, streams and shellfish beds.
 - 5) Contamination of bores, wells and groundwater.
 - 6) Alteration of the local ecology.
 - **Advice on home owner/occupier responsibilities.**
The homeowners and occupiers are *legally* responsible to keep their on-site wastewater system in good working order. If any warning signs (as described above) are evident, the homeowner or occupier must contact their council immediately.
 - **Advice on alternate on-site wastewater systems.**
Specific O & M measures will be required for alternative on-site wastewater treatment units, equipment, facilities and land application system beyond what has been outline above.
These should be obtained from:
 - The designer and installer
(i.e. Design basis; operating requirements; enhancement of factors of safety)
 - Equipment suppliers
(i.e. Regular maintenance schedule; spare parts list; call-out contact details; operational instructions).
 - Local government
(i.e. inspections schedule; reporting defects).
 - The regional environmental control agency
(i.e. monitoring requirements; flow records; reporting environmental incidents).

ROSEWOOD ENVIRONMENTAL SERVICES PTY LTD**APPENDIX D****VEGETATION SUITABLE FOR LAND APPLICATION AREAS****(Source: Environment & Health Protection Guidelines-1998)**

Botanical Name	Approximate Height	Common name or Variety
Grasses		
- Carex spp.		
- Lomandra longifolia **		
- Microlaena stipoides		
- Oplismenus imbecillis		
- Pennisetum alopecuroides	40-80cm	Available as lawn turf
- Poa lab		
- Stipa spp.		
Ground cover/climbers		
- Hibbertia scandens **		
- Hibbertia stellaris		Snake vine
- Isotoma fluviatilis		
- Kennedia rubicunda	Prostrate	
- Scaevola albida	Climber	Dusky Coral Pea
- Scaevola ramosissima		
- Veronica plebeia		
- Viola hederacea **		Native Violet
Sedges/grasses/small plants		
- Anigozanthus flavidus	2m	Kangaroo Paw
- Baumea acuta		
- Baumea articulata	Sedge	
- Baumea juncea	Sedge	
- Baumea nuda	Sedge	
- Baumea rubiginosa	Sedge	
- Baumea teretifolia	Sedge	
- Blandfordia grandiflora	30-90cm	Christmas Bell
- Blandfordia nobilis	30-90cm	Christmas Bell
- Brachyscome diversifolia	Clump	Native Daisy
- Carex appressa	Sedge	
- Cotula coronopifolia	10-20cm	Waterbutton
- Crinum pedunculatum **	<2m	Swamp lily
- Cyperus polystachyos	Sedge	
- Dianella caerulea **	Low plant	Blue Flax Lily
- Epacris microphylla	50cm-1m	
- Ferns		
- Gahnia spp.	Tall grass	
- Juncus spp.	0.5m Rush	
- Lobelia trigonocaulis	5-10cm	
- Lomandra spp. **	Grass	
- Patersonia fragilis		Native Iris
- Patersonia glabrata		Native Iris
- Patersonia occidentalis		Native Iris
- Ranunculus graniticola	5cm	
- Restio australis	Reed	
- Restio tetraphyllus	1m	
- Sowerbaea juncea	Sedge	Rush Lily
- Tetratheca juncea	<30cm	
- Xyris operculata	<1m	Tall Yellow Eye

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Botanical Name	Approximate Height	Common name or Variety
Shrubs		
- Agonis flexuosa nana		
- Baekea linifolia	1-2.5m	
- Baekea utilis	1-2.5m	
- Baekea virgata	<4m	
- Banksia aemula	1-7m	
- Banksia robur	0.5-2m	
- Bauera ruboides	0.5-1.5m	
- Callistemon	2-3m	Burgundy
- Callistemon	2-4m	Eureka
- Callistemon	3-4m	Harkness
- Callistemon	3-4.5m	Kings Park Special
- Callistemon	2-3m	Mauve Mist
- Callistemon	1-2.5m	Red Clusters
- Callistemon	2-3	Reeves Pink
- Callistemon citrinus	50-80cm	Austraflora Firebrand
- Callistemon citrinus	2-4m	Splendens
- Callistemon cirinus	60cm-1m	White Ice
- Callistemon linearis	1-3m	
- Callistemon macropunctatus	2-4m	
- Callistemon pachyphyllus	2-3m	
- Callistemon pallidus	1.5-4m	
- Callistemon paludosus	3-7m	
- Callistemon pinifolius	1-3m	
- Callistemon rigidus	1.5-2.5m	
- Callistemon salignus	3-10m	
- Callistemon shiresii	4-8m	
- Callistemon sieberi	1.5-2m	
- Callistemon sieberi	50-80cm	Austraflora Little Cobber
- Callistemon subulatus	1-2m	
- Callistemon viminalis	1-2m	Captain Cook
- Callistemon viminalis	5-10m	Dawson River
- Callistemon viminalis	3-5m	Hannah Ray
- Callistemon viminalis	50cm-1m	Little John
- Callistemon viminalis	1.5-2m	Rose Opal
- Callistemon viminalis	2-3m	Western Glory
- Goodenia ovata **	1-1.5m	
- Hibiscus diversifolius **	1-2m	Swamp Hibiscus
- Kunzea capitata	1-2m	
- Leptospermum flavescens	<2m	Tea-tree
- Leptospermum juniperinum	1m	Tea-tree
- Leptospermum lanigerum	1-2m	Woolly tea-tree
- Leptospermum squarrosum	<2m	Tea-tree
- Melaleuca alternifolia	4-7m	
- Melaleuca decussata	1-2m	Cross-leaved honey myrtle
- Melaleuca lanceolata	4-6m	
- Melaleuca squamea	1-2m	
- Melaleuca thymifolia		

ROSEWOOD ENVIRONMENTAL SERVICES PTY LTD

Botanical Name	Approximate Height	Common name or Variety
Trees		
- Acacia elongata	>2m	
- Acacia floribunda **	2-4m	Gossamer wattle
- Agonis flexuosa	5-6m	Willow myrtle
- Allocasuarina diminuta	1.5m	
- Allocasuarina paludosa	0.5-2m	
- Angophora floribunda	Large tree	
- Angophora subvelutina	Large tree	
- Callicoma serratifolia **	<4m	
- Casuarina cunninghamiana	10-30m	River she-oak
- Casuarina glauca	6-12m	Swamp oak
- Elaeocarpus reticulatis **	Large tree	Blueberry Ash
- Eucalyptus amplifolia	Large tree	
- Eucalyptus botryoides (coastal areas)*	10-30m	
- Eucalyptus camaldulensis (west of ranges)*	15-20m	River red gum
- Eucalyptus deanei	Large tree	Blue Mountains Blue gum
- Eucalyptus elata	Large tree	River Peppermint
- Eucalyptus grandis *	10-20m	Flooded gum
- Eucalyptus longifolia	20m	Woollybutt
- Eucalyptus pilularis *	30-40m	Blackbutt
- Eucalyptus punctata *	<35m	Grey gum
- Eucalyptus robusta	20-30m	Swamp Mahogany
- Eucalyptus saligna (coastal) *	30-50m	Sydney blue gum
- Eucalyptus tereticornis *	30-40m	Forest red gum
- Eucalyptus viminalis (ranges)	20-40m	Ribbon gum
- Acmena smithii **	10-20m	Lilli pilli
- Flindersia australis	<40m	Native teak
- Hymenosporum flavum **	3-6m	Native frangipani
- Melaleuca armillaris	3-4m	Bracelet Honey Myrtle
- Melaleuca decora	4-7m	
- Melaleuca ericifolia	6m	
- Melaleuca halmaturorum	4-6m	
- Melaleuca hypericifolia	2-3m	
- Melaleuca linariifolia	4-8m	Snow in Summer
- Melaleuca quinquenervia	5-7m	Broad paper bark
- Melaleuca squarrosa	6m	
- Melaleuca stypheloides	6-15m	
- Melia azedarach **	15-20m	White Cedar
- Pittosporum spp. **		
- Syzgium paniculatum **	8-10m	Bush cherry
- Tristania laurina **	5-15m	Kanuka (Water Gum)
- Viminaria juncea	2-3m	Golden spray

NOTE: - *Callistemon, Melaleuca & Leptospermum burn well due to their high oil content.*

- * = Banksia & Eucalyptus are fire hardy but generally do not retard fire.
Eucalypts with* are better because of their smooth bark.
- ** = Indicates plants that have fire resistance or are hard to burn properties and may assist in bushfire protection as well as suitability for wastewater uptake.

EVAPOTRANSPIRATION-ABSORPTION TRENCHES

Kempsey Area

Long term Average Rainfall (Data Drill - Kempsey)
AS1547 - Table G1

file:trial1.wb2

Evaporation data from Data Drill Kempsey)

Under Licence and copyright of Qld Gov.

Void space in drainfield = 30%

1	2	3	4	5	6	7	8	9		
Month	Days	daily pan	Pan Eo	Et	Rainfall	Retained	DLR*N	Disposal	Effluent	Size of
	per	Et		+Cf*Eo	P	Rainfall		rate/month	applied	area
	month	(B.Met)				Re=(1-r)P	8	(Et-Re)+	per month	(8)/(7)
								DLR*N	900	
		mm	mm	mm	mm	mm	mm	mm	L	m2
Jan	31	5.4	167	134	153	91.8	248	289.8	27900	96
Feb	28	4.9	137	110	145	87.0	224	246.6	25200	102
Mar	31	4.1	128	102	168	100.8	248	249.6	27900	112
Apr	30	3.3	99	79	110	66.0	240	253.2	27000	107
May	31	2.4	73	58	110	66.0	248	240.4	27900	116
Jun	30	2.1	62	50	77	46.2	240	243.4	27000	111
Jul	31	2.3	70	56	49	29.4	248	274.6	27900	102
Aug	31	3.0	94	75	30	18.0	248	305.2	27900	91
Sep	30	4.0	121	97	43	25.8	240	311.0	27000	87
Oct	31	4.7	147	118	79	47.4	248	318.2	27900	88
Nov	30	5.0	150	120	112	67.2	240	292.8	27000	92
Dec	31	5.7	176	141	116	69.6	248	319.2	27900	87

Total Eo 1424 Total P 1192

TABLE G2 - Depth of stored effluent First trial - choose from col.9 table above

1	2	3	4	5	6	7			
month	first trial	application	Disposal	(3)-(4)	Increase	Depth	increase	computed	reset if
	area	rate	rate		depth of	effluent	depth	depth	evap deficit
	(m2)	(8)*(2)	per month		stored	for	effluent	effluent	exceeded
			(above)'		effluent	month	+(6)	(X)	
					(5)/0.3			0.0	
Dec								0.0	
Jan	100	279	290	-11	-36	0	-36	-36	0
Feb		252	247	5	18	0	18	18	18
Mar		279	250	29	98	18	98	116	116
Apr		270	253	17	56	116	56	172	172
May		279	240	39	129	172	129	301	301
Jun		270	243	27	89	301	89	389	389
Jul		279	275	4	15	389	15	404	404
Aug		279	305	-26	-87	404	-87	317	317
Sep		270	311	-41	-137	317	-137	180	180
Oct		279	318	-39	-131	180	-131	49	49
Nov		270	293	-23	-76	49	-76	-27	0
Dec		279	319	-40	-134	0	-134	-134	0
Jan		279	290	-11	-36	0	-36	-36	0
Feb		252	247	5	18	0	18	18	18
Mar		279	250	29	98	18	98	116	116
Apr		270	253	17	56	116	56	172	172
May		279	240	39	129	172	129	301	301

From calculations in tables above for optimised drainfield area, using Appendix G AS1547-1994

Runoff Coeff = 0.4 percentage runoff

Crop Factor = 0.8 crop transpiration rate

DLR = 8 L/m2/day

FLows = 900 L/day

Trench dimensions (mm)

width = 1000 mm depth = 600 mm

Estimated area of effluent drainfield = 100 square metres

Length of trench required = 100 metres

Maximum depth of stored effluent = 404 mm depth

Suggested trench lengths = 4 x 25m

Subject Land

1100 Sq metres
Area of land that is outside
of the Flood Planning Area.
Area is above 1%AEP and incorporates a 500mm
Freeboard.

