

ATTACHMENT 2 – LES SPECIALIST STUDIES

Introduction

These Specialist Studies has been compiled based on:

- issues addressed in reports to Council;
- issues raised in an any previous relevant studies and strategies; and
- relevant Section 117 Ministerial Directions.

The content of the Specialist Studies has been agreed upon by the relevant agencies and the Department of Planning as a result of the section 62 consultation process.

The Specialist Studies required to be addressed in the LES are outlined below. Each study is set out in the following manner:

- Issue
- Output
- Objectives
- Tasks / Methodology

The Consultant must perform the Specialist Studies in accordance with this brief. If the Consultant considers that additional studies are required or that any alternate approach may deliver a more cost effective and timely outcome, such information should be included in the response to the Brief with detailed reasons. The Applicant may or may not accept the need for such additional information.

The Consultant is advised that the proposed rezoning will create in the order of 250 – 300 new rural/residential lots, each having a minimum size 4,000m², on the study area. Many lots will be of much greater size where the site constraints, natural features and flora dictate. The subdivision and development of the study area will be undertaken by the landowners, either individually or in cooperation with adjoining owners.

The Consultant will be supplied, free of charge, the support documents listed in the tender documents. Unless otherwise specified, the Consultant may use the whole or any part of these documents, subject to the Consultant's review, verification of sufficiency and any necessary upgrading deemed necessary or beneficial for the response.

1. State and Regional Planning Context

Output

- A detailed Justification Report that clearly examines the consistency of the proposal with the objectives of the relevant State, regional and local plans and strategies as listed below.

Objectives

- To examine the consistency of the proposal with the relevant State, regional and local plans and strategies listed below.

Tasks/Methodology

- Review the proposal's consistency with the objectives of the following strategies and plans:
 - State Plan (updated March 2010)
 - Sydney Metropolitan Strategy
 - Draft South West Subregional Strategy
 - Picton Tahmoor Thirlmere Urban Area Implementation Strategy

- The Wollondilly Vision 2025 and Community Strategic Plan 2030
- Metropolitan Transport Plan: Connecting the City of Cities
- Section 117 Ministerial Directions
- Sydney Regional Environmental Plan No. 2 Hawkesbury - Nepean River (No. 2 -1997)
- Wollondilly Local Environmental Plan 2011.

2. Biodiversity

Output

- Identify, locate and describe the biodiversity values of the study area.
- A comprehensive understanding of the flora, fauna and biodiversity values of the study area and its environmental context in the region.
- Assess and recommend strategies to conserve the ecological attributes of the landscape.
- Develop a strategy to conserve biodiversity values, in accordance with the principles and objectives of the Threatened Species Conservation Act 1995, of the study area and improve remnant vegetation communities and regional linkages to support native flora and fauna.
- Develop principles for the integration of rural/ residential development and the ecological values of the study area, whilst considering the likely requirements for bushfire management and asset protection.
- Recommend zoning regimes and minimum lot sizes to support and maintain the ecological values of the study area.

Objectives

- To provide a description of flora and fauna communities of the study area as contained in existing maps, aerial photography, reports and studies, with field verification.
- An assessment of the condition and the recovery potential of the identified communities.
- To identify Bio-banking potential within the study area.
- Identify biodiversity values that developer contributions should address.

Tasks/Methodology

- An assessment of biodiversity related matters relevant to the site should be undertaken with reference to the environmentally significant land map in the Wollondilly Local Environmental Plan 2011 and DECCW's General Guidelines for Strategic Planning (or equivalent).
- The biodiversity assessment should cover three distinct stages:
 1. flora and fauna assessment (terrestrial and aquatic) with field verification of Council's environmental sensitive land mapping;
 2. analysis of ecological biodiversity values for the study area as a whole.
 3. ranking and mapping of areas of high, moderate or low ecological and biodiversity value based on the results of steps 1 and 2.
- A report detailing the results of steps 1 to 3 with clear recommendations on how to conserve and enhance the ecological and biodiversity features of the study area.

3. Bushfire

Output

- Broadly examine the level of bushfire risk posed to the future development of the study area with reference to Rural Fire Services mapping.
- A review of the existing road network and available reticulation water supply network suitability for fire fighting.
- A review of the necessity for fire trails around the study area.

Objectives

- To assess the ability of the study sites as a whole to satisfy the requirements of existing

legislation.

- To assess whether the statutory requirements of bushfire protection and management are capable of being met.
- To identify bushfire management needs that developer contributions should address.

Tasks/Methodology

- Assess and identify the bushfire hazard and risk for future development of the land.
- Assess whether the future development of the study area is capable of compliance with the Wollondilly Bushfire Risk Management Plan, Section 117 Ministerial Direction No A.4 Planning for Bushfire Protection, NSW Rural Fires Act 1997 and RFS Planning for Bushfire Protection Guidelines 2006.
- The Bushfire hazard and risk assessment needs to give due consideration to the likely rehabilitation of riparian corridors and the recommendations of the biodiversity study to preserve and enhance ecological communities on the study area.
- Identify the potential risk and solutions to minimise the impact that bushfire protection/hazard reduction/asset management may have on threatened species and biodiversity values of the study area having regard to the Bushfire Environmental Assessment Code for NSW and Bushfire Hazard Reduction Assessment Guidelines.

4. Aboriginal and European Heritage

Output

- Preparation of an Aboriginal and European Heritage Assessment of known and potential heritage values based on Council's existing mapping for the whole of Shire LEP 2011.
- Develop appropriate strategies and recommendations for further assessment at the development application stage to manage these heritage values for the study area.

Objectives - Aboriginal

- To identify, assess and map aboriginal cultural heritage places, areas of archaeological potential and Aboriginal heritage value across the study area with reference to the heritage maps prepared for the whole of Shire LEP 2011.
- Provide an overview of existing information regarding Aboriginal heritage within the study area and the broader regional context.
- To involve Aboriginal stakeholder groups in the consultation process for Aboriginal heritage assessment in accordance with the DECC's Final Community Consultation Requirements.
- To develop appropriate management recommendations and strategies for areas of Aboriginal heritage significance.

Objectives - European

- Provide an overview of significant existing or potential cultural landscapes, conservation areas, view and vistas within the study area. Council's heritage mapping for the whole of Shire LEP 2011 is to be used as the basis for this assessment.
- Identification of appropriate zone boundary definitions and development control recommendations to conserve significant items, settings and to manage possible land use conflicts.

Tasks/Methodology - Aboriginal

- An assessment of Aboriginal heritage values relevant to the site should be undertaken with reference to DECCW's General Guidelines for Strategic Planning and the heritage map in the Wollondilly Local Environmental Plan 2011.

- This shall incorporate two stages:
 1. The preparation of Aboriginal archaeological assessment - identification and assessment of Aboriginal objects and making recommendations for their management; and
 2. The preparation of a cultural heritage assessment - involving consultation with Aboriginal stakeholders (groups and individuals) and can include assessment of historical, oral history and broader values.
- The outcomes of the two stages shall be combined into mapping of high, moderate and low Aboriginal cultural value.
- Recommendations to manage Aboriginal heritage values across the study area will be developed.

Tasks/Methodology - European

- Provide an overview of significant existing or potential European heritage within the Study area based on Council's own heritage mapping carried out with the Shire wide LEP 2011.
- Identify, assess and map any European cultural heritage places, values and archaeological potential within the study area.
- The Heritage Act 1997, National Trust and the NSW National Parks and Wildlife Service heritage databases should be consulted in order to identify any existing items of heritage significance in the area affected by the proposal.
- Develop recommendation for the management of any European heritage values within the study area is required.

5. Water Quality and Flood Risk

Output

- Preparation of an integrated water quality management plan.
- Assess the likelihood of mainstream or overland flooding on the study area and any impact of the proposed development on upstream/downstream communities.

Objectives

- To prepare an integrated water quality management plan for the study area.
- To assess the level of impact of stormwater runoff and effluent disposal on Myrtle and Redbank Creeks and the broader Hawkesbury - Nepean catchment from proposed development within the study area.
- To recommended actions and strategies to ameliorate potential negative impacts on the receiving waters.
- To incorporate the principles of Water Sensitive Urban Design and Managing Urban Stormwater as outlined in DECCW's General Guidelines for Strategic Planning. To establish the likelihood of flooding impact/risk on the study area and any impacts the proposed development may have on the flooding behaviour upon upstream/downstream communities.
- To identify water quality management needs that developer contributions should address.

Tasks/Methodology

- Document and map the nature of the existing catchments identifying natural drainage systems (permanent and intermittent) and man-made drainage systems from existing topographic mapping supplied by the proponent.
- Summarise Government endorsed objectives and strategies for water quality and catchment management pertaining to the proposed development.
- Identify riparian enhancement activities and their role in stormwater treatment and design in this regard the principles contain in the publication, Water Sensitive Urban Design should be incorporated into the report.
- Develop a water balance equation for the study area incorporating wastewater, stormwater that optimises reuse and minimises potable use.
- Assess the likelihood of mainstream and overland flooding on the study area and the impact of the proposed development on upstream/downstream communities.

- Should a flood risk be determined, develop appropriate strategies to mitigate the risk consistent with the NSW Floodplain Development Manual (2005) and Section 117 Ministerial Direction No. 4. Flood prone Land.

6. Parking, Traffic and Transport

Output

- An update to the Gabites Porter Traffic Impact Study strategic network model (TRACKS) in accordance with the RTA Guide to Traffic Generating Developments, which will be provided by Council.
- An assessment of the need for State and local traffic infrastructure upgrades to support the proposed for development of the study area.

Objectives

- To identify the impact of the proposed future development of the study area on local road networks.
- To determine the level of any State and/or local traffic infrastructure upgrades required.
- To explore options which facilitate the provision for shared pathway linkages to neighbouring towns and for public transport.
- To identify parking, traffic and transport infrastructure needs that developer contributions should address.

Tasks/Methodology

- The assessment should give consideration to the impacts of the proposed development on Remembrance Drive, utilising:
 1. Council's Traffic Impact Study strategic network model (TRACKS) to determine traffic distributions to and from the study area; and
 2. Intersection modelling using SIDRA to assess any junctions significantly impacted upon.
- Identify suitable infrastructure required to ameliorate and traffic and safety impacts associated with the proposed development of the study area.
- Identification of pedestrian, cyclist and public transport infrastructure needs required to service the proposed development.
- Identify the timing of the infrastructure and appropriate planning mechanism to ensure the infrastructure is provided.

7. Mines Subsidence

Output:

- Establish the likely impacts of long wall mining on the proposed future development, and make recommendations for housing development to appropriately accommodate the implications of the mining activities.

Objectives

- To examine the effects of subsurface longwall mining on the proposed rezoning.
- To evaluate planning provisions that restrict the subdivision of the study area or erection of a residential building until Longwall mining in the Bulli Seam and the effects of subsidence are complete.
- To investigate the impact of future Longwall mining of the Bulli and Wongawilli Seam on the proposed development.
- Recommend surface development guidelines to mitigate the impact of mine subsidence associated with Longwall mining beneath the study area.

Tasks/Methodology

- The Applicant commissioned and has received a report, dated 15/6/11, from a specialist mine subsidence consultant, which provides a prediction of the potential mine subsidence parameters arising from the mining of the Bulli and Wongawilli coal seams beneath the study area.
- A copy of the above report has been provided by the Applicant to the Mine Subsidence Board and the Board has provided the Applicant with a letter, dated 1/07/11, stating that the report satisfies the requirements of the Board and no further investigations are required for the rezoning of the study area.
- A copy of the report and the MSB letter will be provided to the Consultant for inclusion of the relevant information in the LES.
- Provide appropriate controls restricting the subdivision of land or the erection of buildings within the study area until the Mine Subsidence Board approval is granted.

8. Agricultural Land Capability

Output

- An agricultural land capability assessment that broadly examines:
 1. if there will be any loss of current agricultural potential;
 2. if there is any loss of future agricultural land potential; and
 3. if there are any constraints impeding agricultural development within the study area.
- Rezoning of land which provides an acceptable level of social, agricultural and economic sustainability and harmony.

Objectives

- To identify if there will be any loss of current agricultural development within the study area.
- To identify if there is any potential for future agricultural development within the study area.
- To identify if there are any constraints impeding agricultural development within the study area.
- To determine if there is any edge impact between the study area and adjoining agricultural land.
- To determine the appropriate level of development to minimise agricultural land use conflict.

Tasks/Methodology

- Examine the capability of the study area to support agricultural production.
- Examine potential for future agricultural land uses by reference to the Wollondilly Local Environmental Plan 2011.
- Prepare constraints and opportunities mapping for any current and future agricultural development based on social, agricultural and economic sustainability.

9. State and local infrastructure

Output

- An assessment of the provision of appropriate State and local infrastructure.

Objectives

- To assess the need for a State developer agreement to fund provision of necessary infrastructure.
- To assess the availability of infrastructure required enabling connection of the study area to water, telephone and drainage services.
- To assess infrastructure required for the provision of services and pedestrian/cycleway/bus transport infrastructure, community facilities and open space identified as necessary by the LES.
- An assessment of the need for the dedication of roads and open space (this may include the potential landscape buffer/habitat corridor) and funding considerations with regard to the ongoing management and maintenance of any such roads and open space.
- To identify the impact of the proposed development on local roads networks.

Tasks/Methodology

- Analysis of findings of the LES specialist studies and structure plan to determine the timing and mechanism for delivery of infrastructure necessitated by the future subdivision development.

10. Rail Noise Assessment

Output

- A Rail Noise Assessment that examines the impact of rail noise within the rail access corridor on the proposed development as required under the Environmental Planning & Assessment Act 1979.

Objectives

- To minimise any potential impacts of rail noise and vibration on the future development of allotments within the study area.

Tasks/Methodology

- Undertake a rail noise assessment within the rail access corridor of the Main Southern Railway Line and determine whether mitigation of any impact is required.
- Identify any individual existing lots which may need to be further investigated at the development application stage.
- In performing the above task, make reference to the State Environmental Planning Policy (Infrastructure) 2007 (the 'Infrastructure SEPP') and the State Rail publication relating to Noise and Vibration in the Rail access Corridor.

11. Socio-Economic Assessment

Output

- A social and economic impact analysis for the proposed rezoning from rural to R5, Large Lot Residential.

Objectives

- To identify the socio-economic impacts associated with the proposed development.

Tasks/Methodology

- Analysis of the socio-economic impact, if any, of the loss of rural land on the local and regional economy compared to both the 'do nothing scenario' and the change to R5, Large Lot Residential.
- Quantify the demand for R5, Large Lot Residential in the area.
- Investigate options and assess the feasibility for achieving affordable and diverse housing with reference to the Housing NSW's analysis for Wollondilly Shire and their publication Housing Market Analysis - Explanatory Notes and Fact Sheets. Liaise with the Department of Housing in this regard.
- Examine the need for additional community facilities, open space and services which may arise as a result of the change to R5, Large Lot Residential.

12. Contaminated Land

Output

- A preliminary "desk top" Contaminated Site report as required in accordance with *SEPP 55 - Remediation of Land*.
- Field Verification of potential contamination sites.
- Recommendation for the future development controls for the management and assessment of these potential contamination sites at the development application stage.

Objectives

- To determine if there is any expectation of contamination of the study area associated with previous agricultural land uses and the likely sources of that contamination.

Tasks/Methodology

- Perform a "desk top" review the Wollondilly Contaminated Lands Register to establish if there is any record of contamination within the study area with field verification.
- A preliminary Contaminated Site Investigation is required in accordance with *SEPP 55 – Remediation of Land* of the site to determine the level of contamination as a consequence of previous agricultural land uses.
- In undertaking a Contaminated Site Investigation, the successful consultant will be provided with land use history, aerial photography and other relevant information held by Council to assist in the preliminary determination;
- Dependent on the level of potential contamination develop a schedule of actions and types of remediation works that will need to be undertaken at the development application stage.
