

Lend Lease Communities (Calderwood) Pty Ltd
PO Box 4
Parramatta NSW 2124

Project 48742.72
14 June 2018
R.001.Rev1
MG

Attention: Ms. Sarah Kelly

Email: sarah.kelly@lendlease.com

Dear Ms. Kelly

Concept Plan Modification Comment
Modification to the Approved Calderwood Concept Plan (MP09_0082)
Calderwood Valley

As requested, Douglas Partners Pty Ltd (DP) has reviewed existing information in order to provide comment on the geotechnical, acid sulfate soils, groundwater and contaminated land aspects that will be required to be considered in order to support the proposed modification to the Calderwood Concept Plan, reference MP 09_0082 MOD4 (refer to attached Concept Plan drawing).

DP has previously undertaken geotechnical, acid sulfate soils, groundwater and contaminated land investigations to support the original Calderwood Concept Plan application (MP09_0082), which was approved on 8 December 2010. The relevant DP reports are summarised as follows:

- *Report on Geotechnical Investigation, Concept Plan Application, Calderwood Urban Development Project*, DP project 48742.00, Revision 3, dated 3 March 2010
- *Report on Groundwater Assessment, Concept Plan Application, Calderwood Urban Development Project*, DP project 48742.02, Revision 3, dated 3 March 2010
- *Report on Acid Sulphate Soil Assessment, Concept Plan Application, Calderwood Urban Development Project*, DP project 48742.03, Revision 3, dated 3 March 2010
- *Report On Stage 1 Contamination Assessment, Concept Plan Application, Calderwood Urban Development Project*, DP Project 48742.04, Revision 2, dated 3 March 2010.

The previous investigations generally comprised a site history desktop study, field mapping by an experienced engineer, excavation of test pits, drilling of boreholes, installation and monitoring of groundwater wells, laboratory testing of selected samples, engineering analysis and reporting. The previous reports also included recommendations for further work to be undertaken as planning and design of the Calderwood Urban Development Project progresses.

It is understood that a modification to the approved Concept Plan will be sought by Lendlease Communities (Calderwood) Pty Ltd (Lendlease) to permit an increase in diversity and quantity of housing supply constructed as part of the Calderwood Urban Development Project.

The increase in the overall lot yield, from 4,800 dwellings to 6,500 dwellings, is proposed in areas which are zoned 'R1 – General Residential' and 'B4 – Mixed-Use' under the existing Calderwood Concept Plan Approval, including an additional 1000 dwellings proposed within the Town Centre and Education Precinct (Mixed-Use Area). It is further understood that no changes are proposed to the extent of the areas already approved under the existing Calderwood Concept Plan Approval (MP09_0082) and that no changes to lot yield are proposed in current residential stages where development is complete or ongoing, or where development consent has been granted or is being sought from Shellharbour City Council.

An inspection of the site by the writer on 21 May 2018 confirmed that, with the exception of the recent activities associated to the Calderwood Urban Development Project, surface conditions were consistent with those observed during DP March 2010 reports.

As such, it is considered that the conclusions and recommendations provided in the DP March 2010 reports are still appropriate and that the proposed concept plan modification is feasible from the geotechnical, acid sulfate soil, groundwater and contaminated land perspective.

It is further noted that whilst additional investigation and assessment will be required as the planning and design of the project proceeds (as recommended in the DP March 2010 reports), it is considered that further investigation specific to the concept plan modification is not required from the geotechnical, acid sulfate soil, groundwater and contaminated land perspective, since the proposed development footprint and proposed land use remain unchanged.

DP trusts that the above is in accordance with your requirements. Please contact the undersigned should you require further assistance at this stage.

Yours faithfully

Douglas Partners Pty Ltd



Michael Gol
Associate

Reviewed by



G W McIntosh
Principal

Attachments: About this Report
 Site Layout Drawing

cc: Ethos Urban Pty Ltd – Attention: Mr Paul Altree-Williams
 Email: PAltree-Williams@ethosurban.com

About this Inspection Report

Douglas Partners



Introduction

These notes are provided to amplify DP's inspection report in regard to the limitations of carrying out inspection work. Not all notes are necessarily relevant to this report.

Standards

This inspection report has been prepared by qualified personnel to current engineering standards of interpretation and analysis.

Copyright and Limits of Use

This inspection report is the property of DP and is provided for the exclusive use of the client for the specific project and purpose as described in the report. It should not be used by a third party for any purpose other than to confirm that the construction works addressed in the report have been inspected as described. Use of the inspection report is limited in accordance with the Conditions of Engagement for the commission.

DP does not undertake to guarantee the works of the contractors or relieve them of their responsibility to produce a completed product conforming to the design.

Reports

This inspection report may include advice or opinion that is based on engineering and/or geological interpretation, information provided by the client or the client's agent, and information gained from:

- an investigation report for the project (if available to DP);
- inspection of the work, exposed ground conditions, excavation spoil and performance of excavating equipment while DP was on site;
- investigation and testing that was carried out during the site inspection;
- anecdotal information provided by authoritative site personnel; and

- DP's experience and knowledge of local geology.

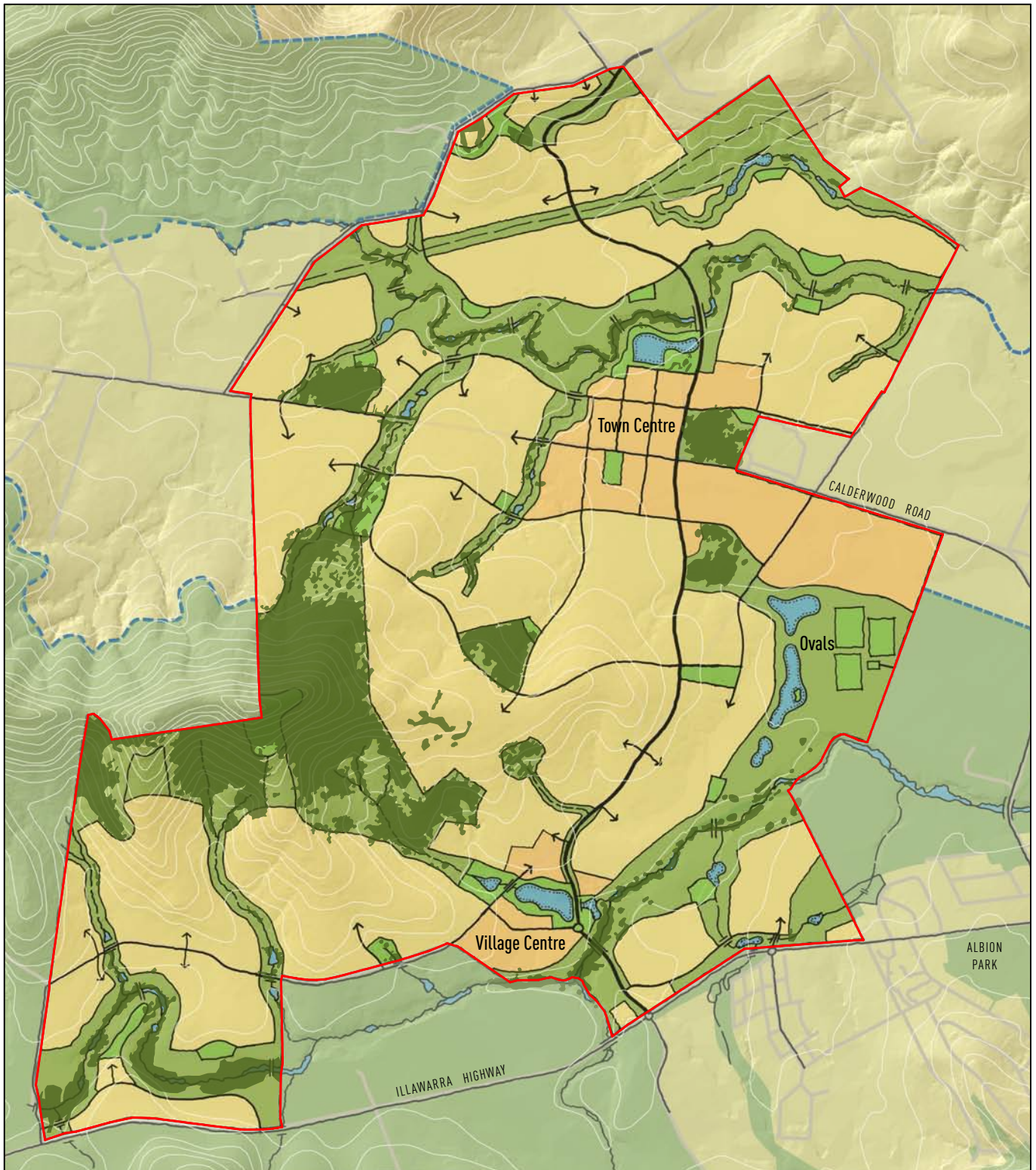
Such information may be limited by the frequency of any inspection or testing that was able to be practically carried out, including possible site or cost constraints imposed by the client/contractor(s). For these reasons, the reliability of this inspection report is limited by the scope of information on which it relies.

Every care is taken with the inspection report as it relates to interpretation of subsurface conditions and any recommendations or suggestions for construction or design. However, DP cannot anticipate or assume responsibility for:

- unexpected variations in subsurface conditions that are not evident from the inspection; and
- the actions of contractors responding to commercial pressures.

Should these issues occur, then additional advice should be sought from DP and, if required, amendments made.

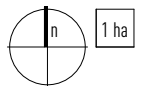
This inspection report must be read in conjunction with any attached information. This inspection report should be kept in its entirety without separation of individual pages or sections. DP cannot be held responsible for interpretations or conclusions from review by others of this inspection report or test data, which are not otherwise supported by an expressed statement, interpretation, outcome or conclusion stated in this inspection report.



Concept Plan

Part 3A | Calderwood Urban Development Project

- Town and Village Centres**
Mixed Uses including Retail, Employment, Residential, Learning and Community Amenities
- Residential Neighbourhoods**
- Parks**
eg Citywide, district and local parks
- Principal Open Space and Drainage**
eg Environmental Conservation, Environmental Management and Drainage Corridors
- Indicative Water Bodies**



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Subject to verification and detailed site survey 1:20,000 @ A4 10m Contours February 2010