

# Infrastructure, Services and Facilities Implementation and Delivery Proposal



## Calderwood Urban Development Project

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## EXECUTIVE SUMMARY

This Proposal to Government details how infrastructure, services and facilities will be delivered by Delfin Lend Lease for the Calderwood Urban Development Project.

The implementation and delivery proposal has been developed during the detailed investigations required to address the Director General's Requirements for the Concept Plan and initial Project Application and the Scope of the Study for the proposed State Significant Site listing of the Project. Relevant information from several separate Assessments and Reports has been consolidated to present this comprehensive implementation and delivery Proposal. In summary:

- The Social and Community Assessment details specific community facilities requirements and community development initiatives;
- Utilities, Water Cycle Management and Transport Assessments detail the necessary infrastructure measures to implement the Project;
- Open space and recreation needs are detailed in the Community Assessment and Open Space Master Plan and integrated into the Project Concept Plan; and
- All other technical assessments support the Project.

The Environmental Assessment for the Calderwood Urban Development Project details the justification for the Project. The Project will deliver many benefits to the Shellharbour LGA and the Illawarra Region. In terms of Public Benefit:

- The Economic Impact Analysis for the Project prepared by PWC concludes that the project will inject (directly) an estimated \$2.9 billion into the local economy during the construction period, create an additional PV\$6.3 billion in net value and create an additional 7,900 full time equivalent positions, 5,260 of which will be in the Shellharbour LGA;
- Detailed site analysis demonstrates a relatively high ratio of urban capable land that can deliver 4,800 dwellings and 50 hectares of retail, education, community and employment land for development and 270 hectares of land for open space, recreation and conservation;
- The Project proposes responses to the Illawarra Land Supply and Housing Affordability dilemma;
- The Project secures land earmarked for urban development for that use noting that existing economic output from the land is of minimal value; and
- The basic principle of infrastructure, service and facility delivery is that it is programmed to be available as the new community develops.

This Proposal to Government is by Delfin Lend Lease, part of the Lend Lease Group which is one of the world's leading fully integrated property companies. Operating within the Lend Lease Group Delfin Lend Lease is Australia's leading developer of Master Planned communities with 31 Projects trading in 10 major population centres across Australia.

Government can consider the Proposal with the confidence and assurance that it is realistic and backed by a proponent with the financial resources and core business skills to deliver the Calderwood Urban Development Project.

## 1.0 INTRODUCTION

This Proposal to Government has been prepared by Delfin Lend Lease to detail infrastructure, services and facilities implementation and delivery for the Calderwood Urban Development Project. A Concept Plan Application under Part 3A of the *Environmental Planning & Assessment Act, 1979* (EP&A Act) and a proposal for State Significant Site listing under Schedule 3 of *State Environmental Planning Policy Major Development 2005* (SEPP Major Development) is being submitted in parallel for the Project.

This Proposal consolidates the various components of Project infrastructure, services and facilities requirements identified in a number of separate specialist reports. It has been designed to assist Government with its assessment of the Project and to form the basis of the Planning Agreements for the Project. The Proposal also identifies infrastructure, services and facilities to be delivered by other Agreements including with commercial entities so that Government can be assured that the full scope of the project requirements are understood.

The Calderwood Urban Development Project is a master planned community development by Delfin Lend Lease that proposes a mix of residential, employment, retail, education, conservation and open space uses. The development proposes 4,800 dwellings and 50 hectares of retail, education, community and mixed use / employment land. The overall development will accommodate about 12,000 people and will deliver \$2.9 billion in Project expenditure and create 7,900 full time equivalent jobs.

The Project and its planning status are described in detail in the Concept Plan and Environmental Assessment Report and are not restated here. However, a number of specific components of the Environmental Assessment Requirements issued by the Director General for the inclusion of the Calderwood site as a State Significant Site under SEPP Major Development, and for a Concept Plan approval for the development are relevant to infrastructure, services and facilities delivery. These are summarised in the following Table.

### 1.1 Director General's and State Significant Site Study Requirements

<b>Director General's</b>	<b>Detail</b>
<b>General Requirement</b>	<i>A detailed description of the project including the infrastructure staging. Identify the development contributions applicable to the site and, if relevant, and any public benefits to be provided with the development, and consider any relevant development contributions plans prepared to date.</i>
<b>Transport and Accessibility</b>	<i>Timing/delivery/scope of local and regional road infrastructure. Identify infrastructure including road, pedestrian and cycling infrastructure to ameliorate the impacts of development.</i>
<b>Biodiversity</b>	<i>Identify lands proposed for dedication.</i>
<b>Water Courses/Riparian Corridors</b>	<i>Proposed revegetation of riparian corridors. Surface Water and Groundwater assessment including any proposed surface water and groundwater extraction volumes, function and location of proposed storage/ponds, design, layout, pumping and storage capacities, and all associated earthworks and infrastructure works. Details on any water management structures/dams both existing and proposed including size and storage capacity.</i>
<b>Drainage and Stormwater Management</b>	<i>Drainage infrastructure.</i>

<b>Director General's</b>	<b>Detail</b>
<b>Utilities infrastructure</b>	<i>Prepare a utility and infrastructure servicing strategy detailing supply of water, sewerage, stormwater, gas, electricity and telephone services.</i>
<b>Social and community</b>	<i>Demand for social and community facilities and proposed S94 contributions. Details of open space and community facilities, ongoing maintenance, and arrangement for public use, especially as the site is in 2 local government areas.</i>
<b>Planning Agreements and /or Developer contributions</b>	<i>The environmental assessment should address and provide the likely scope of planning agreement (should one be proposed) and/or developer contributions between the proponent, Council and other agencies for matters such as community, regional and local infrastructure. It should address demand, proposed services, local and regional services and cross boundary/LGA issues.</i>
<b>Major Project</b>	<b>Detail</b>
	<i>The implications of any proposed land use for infrastructure, service delivery. The means by which local and regional developer contributions should be secure in respect of the site. Appropriate arrangements for the dedication of land to council for public open space purposes.</i>

This proposal responds to the relevant Director General's Requirements for delivery of infrastructure, facilities and services. In addition, in developing the Calderwood Infrastructure, Facilities and Servicing Strategy, DLL has identified the following objectives:

- Demonstrate a viable implementation strategy;
- Timely provision of facilities and services;
- Control of land required for infrastructure delivery to leverage ready access to existing infrastructure capacity;
- Provision of structural enhancements to the Regional infrastructure base and potential synergies with other Release Areas;
- Minimise implementation risk and cost to Government; and
- Utilise DLL delivery experience and skill base to ensure innovation and flexibility in design and use of facilities.

The need for new services and infrastructure presents an opportunity to:

- Provide infrastructure and high quality new facilities in a timely manner based on leading practice sustainability principles that are tailored to the needs of the future community;
- Deliver sustainable infrastructure solutions such as Fibre to the Home/Premise (FttP / FttH) and sustainable funding, management and maintenance arrangements; and
- Guide the provision of integrated service delivery, efficient use of resources and equitable access through shared or co-located facilities, joint use arrangements and convenient locations.

This proposal for infrastructure, services and facilities implementation delivery has been prepared following ongoing and formal consultation with Shellharbour and Wollongong Councils, Department of Education and Training, Ministry of Transport, Roads and Traffic Authority, Human Services Agencies, and each of the servicing authorities including Sydney Water, Telstra, Integral Energy and Jemena. Staging sequences have been created to demonstrate that the area can be developed logically and economically with the full suite of utility services.

## 2.0 OVERVIEW OF SPECIALIST REPORTS

The Director General's Requirements identified above have been addressed in detail in several specialist consultant reports. The delivery and implementation requirements from each specialist report are summarised below. The Master Planned layout for the Project provides an efficient integrated delivery and implementation platform for Infrastructure, Services and Facilities.

### 2.1 Social and Community Planning Assessment

The Social and Community Planning Assessment provides a comprehensive assessment of the community facilities and services required at Calderwood, in terms of local government social infrastructure, State Government facilities and services and those to be developed by the private and non-government sectors. The following Table summarises the delivery of Community Facilities and Human Services to the Project.

<i>Item</i>	<i>Implementation</i>
<b>Community</b>	<ul style="list-style-type: none"> <li>Land and building (including fit out) for a large multi purpose community resource centre.</li> <li>Co-located branch library.</li> <li>Temporary community centre.</li> <li>Community development strategy.</li> </ul>
<b>Education</b>	<ul style="list-style-type: none"> <li>Land for two public primary schools along with a special needs unit.</li> <li>Land for one public high school.</li> <li>One private school (primary/secondary).</li> </ul>
<b>Child care</b>	<ul style="list-style-type: none"> <li>Up to 3 childcare centres.</li> </ul>
<b>Health, Emergency and Police Services</b>	<ul style="list-style-type: none"> <li>No specific requirements identified. Some initial duplication, delivery and augmentation of existing services may be required, noting that such services will require expansion as a result of population growth in the region.</li> <li>Private health operators by commercial agreement.</li> </ul>
<b>Retirement living</b>	<ul style="list-style-type: none"> <li>Private operators by commercial agreement.</li> </ul>

### 2.2 Utility Services Study

The Utilities Services Study builds on the infrastructure and servicing strategy for the Calderwood Urban Development Project as outlined on pages 10 to 21 of the Calderwood Release Area Justification Report. Strategies for proposed utility service delivery have been prepared and discussed with each of the servicing authorities. Calderwood is an extension to the existing urban footprint of Albion Park and Tullimbar which are fully serviced with sewer, potable water, telecommunications, electricity and gas. Through the DLL landholding, Calderwood has direct access to sewerage, telecommunications and gas, and is strategically located close to all other utility services. The following Table summarises the delivery of Utility services to the project.

<i>Item</i>	<i>Implementation</i>
<b>Sewer and Potable Water</b>	<ul style="list-style-type: none"> <li>Project is identified in Sydney Water's Growth Services Plan (GSP) for the period July 2009 to June 2014.</li> <li>Initial servicing through existing capacity with upgrades programmed in GSP to accommodate future development.</li> <li>Reticulation by DLL through sub-division process.</li> </ul>



<i>Item</i>	<i>Implementation</i>
<i>Electricity</i>	<ul style="list-style-type: none"> <li>▪ <i>Initial servicing through existing capacity and distribution station at Albion Park.</i></li> <li>▪ <i>Zone substation required to supply overall development. Suitable site identified for transfer to Integral Energy.</i></li> <li>▪ <i>Reticulation by DLL through sub-division process.</i></li> </ul>
<i>Gas</i>	<ul style="list-style-type: none"> <li>▪ <i>Jemena is developing a network upgrade strategy for the Project</i></li> <li>▪ <i>Reticulation by DLL through sub-division process..</i></li> </ul>
<i>Telecommunications</i>	<ul style="list-style-type: none"> <li>▪ <i>Telecommunications can be supplied to the site.</i></li> <li>▪ <i>Fibre to the home/premise can be supplied by either Telstra or OPENetworks consistent with the principles of the National Broadband Network (NBN).</i></li> <li>▪ <i>Reticulation by DLL through sub-division process.</i></li> </ul>

## Social and Community Planning Assessment

### Landscape and Open Space Master Plan

### The Flora and Fauna Report

### Geomorphology Assessment

The proposal for implementation and delivery of the Open Space and Recreation network is the result of a number of individual Assessments and Reports. These are:

- The Social and Community Planning Assessment, which identifies the community open space and recreation needs.
- The Landscape and Open Space Master Plan, which frames the delivery of the required items having regard to the Concept Plan and relevant site features.
- The Flora and Fauna Study, which identifies management frameworks for ecological and biodiversity issues which enable long term conservation and management, while facilitating the development outcomes.
- The Geomorphology Assessment reports on the ground truthing carried out to confirm riparian corridors and provide an important input to the Concept Plan and Landscape and Open Space Master Plan.

This information is consolidated into a package of items ranging from local neighbourhood parks and sporting facilities to environmental reserves. These are summarised in the following Table.

<i>Item</i>	<i>Implementation</i>
<i>Open Space</i>	<ul style="list-style-type: none"> <li>▪ <i>13 local parks, 5 district parks, 3 city wide parks, sports fields and primary and secondary pathways total area 38ha.</i></li> </ul>
<i>Corridor land</i>	<ul style="list-style-type: none"> <li>▪ <i>154 ha corridor open space.</i></li> </ul>
<i>Environmental land</i>	<ul style="list-style-type: none"> <li>▪ <i>78 ha environmental reserve and city wide bushland.</i></li> </ul>
<i>Pathways</i>	<ul style="list-style-type: none"> <li>▪ <i>35,000 linear metres of primary and secondary paths in open space and road corridors respectively.</i></li> </ul>

## 2.3 Water Cycle Management Study

The Water Cycle Management Study:

- Identifies strategies for potable water supply conservation targets and identifies sustainable integrated options for water supply, wastewater and stormwater servicing;
- Optimises the land take to implement the above strategies with consideration for integration with urban design, salinity risk and riparian corridor protection measures; and

- Includes an implementation plan to ensure the early provision and effective ongoing management of service of infrastructure.

These are summarised in the following Table:

<i>Item</i>	<i>Implementation</i>
<i>Gross Pollutant Traps</i>	<ul style="list-style-type: none"> <li>Subject to detailed design, approximately 80 GPTs will be provided at locations where piped drainage system discharges to riparian corridors, ponds and wetlands.</li> </ul>
<i>Bio-retention swales/bio-retention basins</i>	<ul style="list-style-type: none"> <li>To be placed strategically throughout the Project to improve water quality and enhance landscape and amenity where grades and soil types permit.</li> </ul>
<i>Water quality control ponds and wetlands</i>	<ul style="list-style-type: none"> <li>Approximately 10 hectares of ponds and wetlands will be constructed across the Project.</li> <li>These will be designed to provide best practice pollutant reduction whilst minimising the need for ongoing maintenance obligations.</li> </ul>
<i>Detention storage</i>	<ul style="list-style-type: none"> <li>Consistent with relevant Council policies, provided by dynamic storage in ponds and wetlands to create dual use infrastructure consistent with best industry practice.</li> </ul>
<i>Post construction monitoring and maintenance</i>	<ul style="list-style-type: none"> <li>Appropriate periods to be agreed to ensure infrastructure is functioning in accordance with design intent before handover to Council.</li> </ul>

## 2.4 The Transport Management and Accessibility Plan

### The Concept Plan

The TMAP models the Project and identifies infrastructure and other measures to militate against the impacts of development. The TMAP also details the timing, delivery and scope of local and regional road infrastructure. In terms of infrastructure, services and facilities, the Concept Plan identifies the physical features of the land, Project structure and framework, land uses, urban form, movement and open space hierarchy, and other relevant features that influence the internal road network and ensure connectivity to the external road system. These measures are identified in the following Table:

<i>Item</i>	<i>Implementation</i>
<i>Measures to reduce car dependency</i>	<ul style="list-style-type: none"> <li>Timely provision of facilities and services</li> <li>Fibre to the premise/ home</li> <li>Urban design</li> <li>Land use/ transport integration</li> <li>Community portal/resident information kits</li> <li>Public transport promotion</li> </ul>
<i>Active Transport Principles</i>	<ul style="list-style-type: none"> <li>Local access street design</li> <li>Pedestrian/cycle hierarchy</li> <li>Parking strategies – vehicles and bicycles</li> </ul>
<i>Local road contributions (SCC)</i>	<ul style="list-style-type: none"> <li>Potential for contributions to 7 road and intersection upgrades in the Shellharbour LGA</li> </ul>
<i>Local road contributions (WCC)</i>	<ul style="list-style-type: none"> <li>Potential for contributions to 4 road and intersection upgrades in the Wollongong LGA</li> </ul>
<i>State/Regional roads contribution</i>	<ul style="list-style-type: none"> <li>Potential for contributions to 16 road and intersection upgrades, 7 of which are in the Shellharbour LGA and 9 of which are in the in the Wollongong LGA</li> </ul>



### 3.0 IMPLEMENTATION AND DELIVERY OPTIONS

Single developer control of consolidated land holdings with scale provides the opportunity for delivery as works in kind ensuring control over implementation timeframes and meeting community requirements in a timely manner. The flexibility also exists under such arrangements to provide monetary contributions, dedicate land and provide for maintenance and handover arrangements. DLL has entered into Planning and Developer Agreements with both State and Local Government for the delivery of infrastructure and services for a number of Projects and is a supporter of such arrangements.

Consistent with State Government policy, among the most significant proposed delivery mechanisms are commercially binding Planning Agreements with Council and State Government that detail the infrastructure, facilities and open space required for the Calderwood Urban Development Project. There are also a number of other delivery mechanisms ranging from the GSP for Sydney Water Infrastructure to commercial agreements between DLL and other entities, both public and private sector. The following table provides a summary of matters covered by such arrangements.

<b><i>Delivery</i></b>	<b><i>Item</i></b>
<b><i>State Planning Agreement</i></b>	<i>Regional transport works. Sites for regional, health, emergency services, justice, aged, disabled, community and education uses as determined. Monetary contributions. Other land dedications.</i>
<b><i>Council Planning Agreement(s)</i></b>	<i>Local transport works and contributions. Local open space and recreation facilities including maintenance and handover requirements. Local human and community services facilities and requirements. Additional services and facilities including water quality and quantity control measures (wetlands and basins, bio-retention swales, riparian corridors). Monetary contributions. Other land dedications.</i>
<b><i>Sydney Water Growth Services Plan</i></b>	<i>Potable water and sewer infrastructure is covered by the procedures detailed in the Sydney Water Growth Services Plan.</i>
<b><i>Utility services lead-in planning</i></b>	<i>Integral Energy substation site identification and transfer. Liaison and consultation with relevant strategic network planning groups.</i>
<b><i>Sub-division process</i></b>	<i>Detailed design, delivery and transfer utility services. Detailed design, delivery and transfer of internal roads. Detailed design delivery and transfer of other Council assets.</i>
<b><i>Commercial Agreements</i></b>	<i>All other items not covered by the above Agreements/processes including fibre to the premise/home and other requirements such as retail, child care, retirement villages and the like. Land for electricity substation.</i>

### 3.1 SCHEDULES OF INFRASTRUCTURE SERVICES AND FACILITIES

The Infrastructure, Services and Facilities summarised in Section 2.0 above are listed in more detail in the Schedule at Attachment 1 together with the proposed method of delivery and timing. These provide the consolidated Project Proposal.

The items specifically proposed for delivery through Planning Agreements are shown at Appendix DD to the State Significant Site Study and Environmental Assessment Report for Shellharbour Council, Wollongong Council and The Minister for Planning.

## 4.0 DELFIN LEND LEASE ORGANISATIONAL CAPACITY

This Proposal is more than a speculative venture aimed at boosting balance sheets; it is a realistic investment proposal by a proponent with financial resources and core business skills in urban development. Government can consider the Project in the knowledge and confidence that the implementation procedures below will be used to deliver the Project.

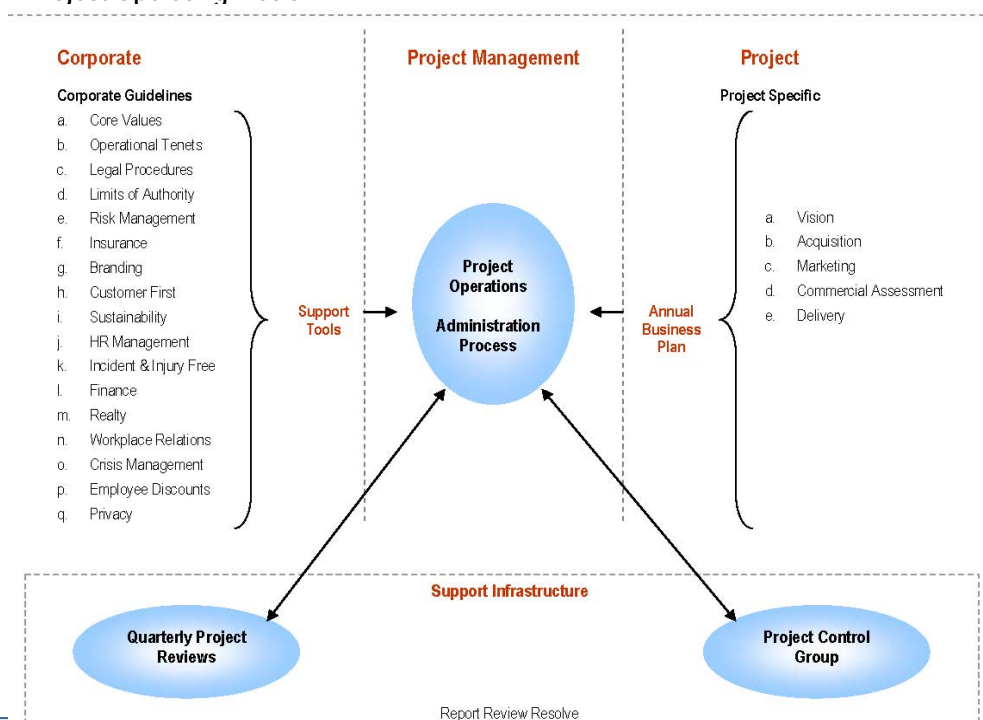
### The Delfin Lend Lease Approach to Project Implementation

The Calderwood Urban Development Project will be implemented via the standardised Lend Lease Communities Project Operating Platform, which provides the management systems and reporting structures on all Lend Lease Communities projects. Its major functions are to ensure that projects are being managed in accordance with best practice and that staff understand the project delivery process. This ensures the commitment of staff to delivering project social, environmental and commercial targets, whilst recognising and managing the associated risks.

The Project Operating Platform demonstrates the range of Corporate Guidelines and Policies to implement Master Planned Urban Development Projects including Project Management, Financial Management and Grievance Procedures. These policies can be made available for review if required.

The Project Operating Platform provides the appropriate expertise, checks and balances to secure delivery as shown in Figure 1.

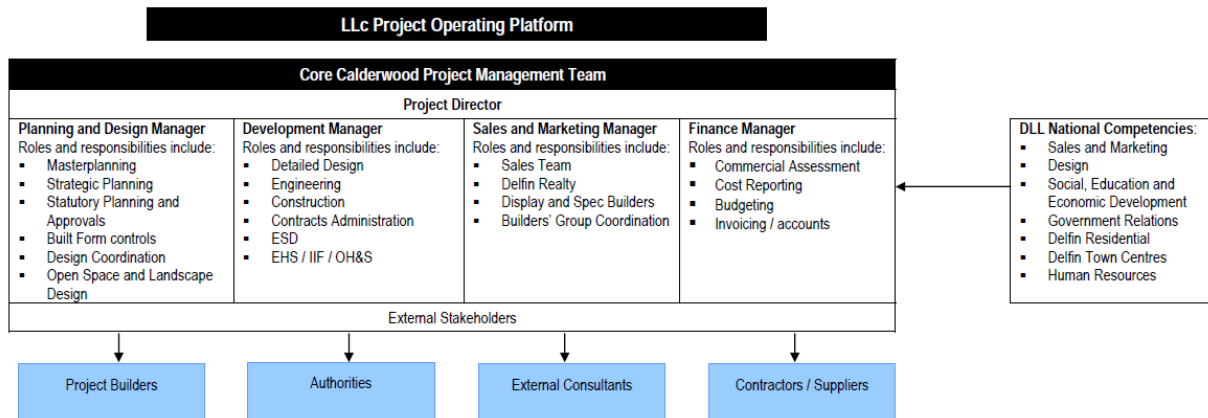
Figure 1 – Project Operating Platform



## Calderwood Urban Development Project Management Structure

An appropriately staffed Project team will be established at the Calderwood Project site. A typical on site Project Team contains specialist expertise, illustrated in Figure 2, and covers all disciplines required for the delivery of Master Planned Urban Communities including planning, design, engineering, financial, marketing and sales. These resources are supplemented as required.

Figure 2 – Calderwood Urban Development Project Organisational Structure



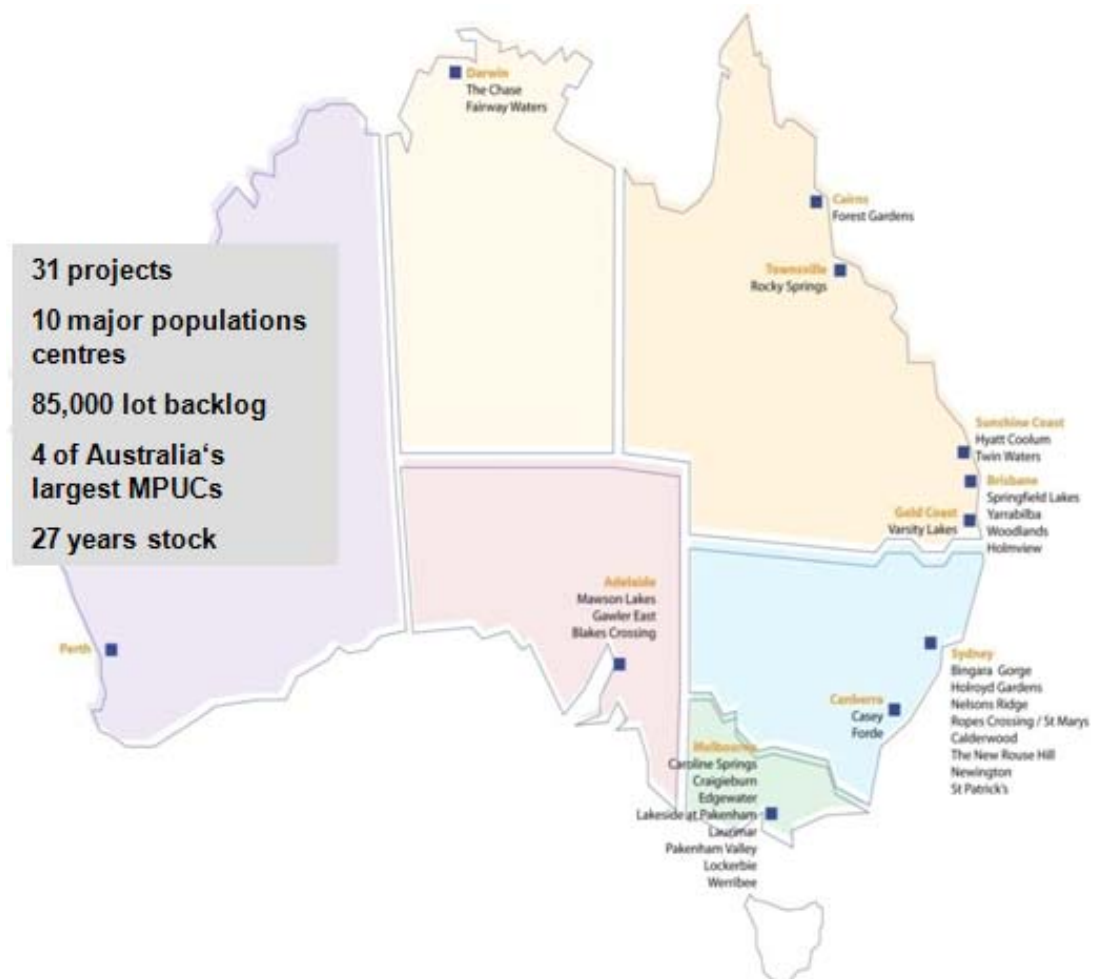
## Delfin Lend Lease Credentials

Lend Lease is one of the world's leading fully integrated property solution providers with strong Development Management, Project Management and Construction, Investment Management and Asset and Property Management capabilities. Lend Lease operates in The Americas, Asia Pacific and Europe. Lend Lease market sectors include Retail, Residential, Commercial, Infrastructure and Retirement.

Operating within the Group, DLL delivers homes to 8,000 Australians a year through its Master Planned Urban Communities and other developments. As well as providing certainty and capacity, this global network enables DLL to deliver key infrastructure early, and to access global trends first.

DLL is Australia's leading developer of Master Planned Communities, with 31 Projects trading in 10 major population centres across Australia – see Figure 3. Our 40 year track record in successfully delivering Master Planned Communities of significant scale is unrivalled. We have housed more than 150,000 people across the communities we have developed to date. No other developer has the breadth of experience, or the in-house skills to deliver true Master Planned Communities with dedicated economic strategies, regional shopping, commercial and employment precincts, educational facilities, and residential offerings to suit a broad demographic.

Figure 3 – DLL Master Planned Urban Communities



## 5.0 SUMMARY AND CONCLUSION

This Proposal:

- Consolidates in a single document the infrastructure facilities and services required for the Calderwood Urban Development Project and identifies methods of delivery and responsibilities and timeframes for delivery;
- Nominates the means by which the local and regional developer contributions should be delivered;
- Identifies appropriate arrangements for the dedication of land to Council for public open space and other purposes; and
- Presents Delfin Lend Lease delivery credentials for such proposals.

The Proposal highlights the advantages of implementation through single development and commercial control over substantial land holdings. It provides the following features through integrated Master Planning:

- A single point of responsibility for delivery and implementation;
- Avoidance of the need for co-ordination and management of multiple landowner monetary, in-kind and land contributions into infrastructure and service delivery outcomes;
- Efficient internal utilities distribution networks with good connectivity;
- Integrated transport and land use solutions;
- Co-ordinated landscape and open space places, public domain and urban design;
- Opportunity for innovative services delivery models, including sharing of facilities and co-location; and
- Co-ordinated community/children's/health services delivered through a multi-purpose, flexible community centre; and
- Incremental and predictable delivery of infrastructure, services and facilities so that they are available when required.

As far as the Director General's Requirements and State Significant Study Requirements are concerned the Proposal:

- Details infrastructure staging;
- Identifies the development contributions applicable to the site and summarises public benefits to be provided with the development;
- Addresses the implications of any proposed land use for infrastructure and service delivery;
- Proposes the means by which local and regional developer contributions should be secured; and
- Identifies appropriate arrangements for the dedication of land to council for public open space purposes.

The Proposal is commended to Government.

# Attachment A

## Detailed Schedules



**Calderwood Urban Development Project  
Infrastructure, Service and Facilities Delivery Program**

Type of Facility/Service/Infrastructure	Details	Delivery Responsibility	Method of Delivery	Land	Preliminaries		Calderwood Urban Development Project (4,800 lots) DLL landholdings												
					2011	2012	2013	2014	2016	2018	2020	2022	2024	2026	2028	2030	2032	2034	2036
<b>Dwelling No. (Cumulative)</b>							50	180	600	1000	1500	2000	2400	2800	3300	3700	4200	4600	4800
<b>KEY INITIAL MILESTONES</b>																			
Site Works Commence	Note Key Milestone	NA	NA	NA															
Commence engagement with local services providers	Note Key Milestone	NA	NA	NA															
First Resident	Note Key Milestone	NA	NA	NA															
Public transport commences	Operator/ NSW Transport and Infrastructure Agreement	Operator	NA	NA															
<b>1. COMMUNITY AND EDUCATION</b>																			
<b>1a. Community Facilities and Initiatives</b>																			
<b>Shellharbour City Council</b>																			
Temporary community centre	Located in village centre.	DLL VPA	WIK																
Community Centre (incorporating branch library)	Located town centre; land, building approx. 900 m2, furniture and fittings	DLL WIK VPA	WIK	0.4 ha															
Branch library	Located town centre; co-located Community Centre land, building approx 625 m2, furniture and fittings.	DLL WIK VPA	WIK	0.2 ha															
Community Development Worker	5 year full time equivalent	DLL WIK VPA	WIK	NA															
Resident Information Kit	Information kit for new households.	DLL WIK VPA	WIK	NA															
Community Initiatives Fund	To support new community.	DLL WIK VPA	WIK	NA															
<b>1b. Education</b>																			
Public Primary School (1)	Land dedication by DLL; Buildings by Government.	DLL VPA	WIK	3 ha															
Public Primary School (2) and Special Needs	Land dedication by DLL; Buildings by Government.	DLL VPA	WIK	4 ha															
Public High School	Land dedication by DLL; Buildings by Government.	DLL VPA	WIK	6 ha															
Private School opens (Primary / High)	Commercial agreement DLL/Operator	DLL Commercial Agreement	NA	NA															
<b>1c. Integrated Children's Services Centre/Childcare Centres</b>																			
Childcare Centre (1) opens	Commercial agreement DLL/Operator	DLL Commercial Agreement	NA	NA															
Childcare Centre (2) opens	Commercial agreement DLL/Operator	DLL Commercial Agreement	NA	NA															
Childcare Centre (3) opens	Commercial agreement DLL/Operator	DLL Commercial Agreement	NA	NA															
<b>2. RETAIL / COMMERCIAL CENTRES</b>																			
Stage 1 Village Centre	Commercial agreement DLL/Operators	DLL Commercial Agreements	NA	NA															
Stage 1 Town Centre	Commercial agreement DLL/Operators	DLL Commercial Agreements	NA	NA															
Stage 2 Town Centre	Commercial agreement DLL/Operators	DLL Commercial Agreements	NA	NA															
<b>3. OPEN SPACE AND PUBLIC DOMAIN</b>																			
<b>3a. Shellharbour LGA Open Space</b>																			
L4 – L13 Local Parks (10 @ 0.30 ha each)	Embellishment standards to Council's local park standards and include	DLL VPA	WIK	3.0 ha															

Type of Facility/Service/Infrastructure	Details	Delivery Responsibility	Method of Delivery	Land	Preliminaries		Calderwood Urban Development Project (4,800 lots) DLL landholdings												
					2011	2012	2013	2014	2016	2018	2020	2022	2024	2026	2028	2030	2032	2034	2036
<b>Dwelling No. (Cumulative)</b>							50	180	600	1000	1500	2000	2400	2800	3300	3700	4200	4600	4800
D2 District Park (1 ha)	pedestrian/cycle pathways, play space, seating/tables/bins, signage, landscape. Embellishment standards to Council's district park standards and include pedestrian/cycle pathways, playground, seating/tables/bins, shade structure, signage, enhanced landscape standard.	DLL VPA	WIK	1.0 ha															
D3 District Park (1 ha)	As above.	DLL VPA	WIK	1.0 ha															
D4 District Park (3.80 ha)	As above.	DLL VPA	WIK	3.80 ha															
D5 District Park (1 ha)	As above.	DLL VPA	WIK	1.0 ha															
CW2 Citywide Park (Urban) (2.47 ha)	Lakeside urban park level of embellishment to district park plus outdoor artworks.	DLL VPA	WIK	2.47ha															
CW3 Citywide Park (Johnston's Spur) (2.64 ha)	As above.	DLL VPA	WIK	2.64 ha															
S1 Sports Fields (15.98 ha)	Sporting grounds, amenities building, training facilities, lighting, vehicular access and parking.	DLL VPA	WIK	15.98 ha															
Paths in Open Space (Primary and Secondary)	Linear metres to suit design.	DLL VPA	WIK	3.61 ha															
C6 – C17 Corridors	Mix of passive recreation, open grassed areas, some regeneration.	DLL VPA	WIK	105 ha															
ER1 Environmental Reserve (3.39 ha)	Mix of regeneration, weed control, possible fencing, pathways.	DLL VPA	WIK	3.39 ha															
ER2 Environmental Reserve (4.20 ha)	Mix of regeneration, weed control, possible fencing, pathways.	DLL VPA	WIK	4.20 ha															
ER3 Environmental Reserve (4.20 ha)	Mix of regeneration, weed control, possible fencing, pathways.	DLL VPA	WIK	4.24 ha															
ER4 Environmental Reserve (4.95 ha)	Mix of regeneration, weed control, possible fencing, pathways.	DLL VPA	WIK	4.75 ha															
CB1 Citywide Bushland Zones (44.98 ha)	Mix of regeneration, weed control, possible fencing, pathways.	DLL VPA	WIK	44.98 ha															
CB2 Citywide Bushland Zones (16.13 ha)	Mix of regeneration, weed control, possible fencing, pathways.	DLL VPA	WIK	16.13 ha															
PR3 Paths in Road Corridors (Primary and Secondary)	Linear metres to suit design.	DLL VPA	WIK	2.77 ha															
<b>3b. Wollongong LGA Open Space</b>																			
L1 – L3 Local Parks (3 @ 0.30 ha each)	Embellishment standards to Council's standards and include pedestrian/cycle pathways, play space, seating/tables/bins, signage, landscape.	DLL VPA	WIK	0.9 ha															
D1 District Park (1 ha)	Embellishment standards to Council's district park standards and include pedestrian/cycle pathways, playground, seating/tables/bins, shade structure, signage, enhanced landscape standard.	DLL VPA	WIK	1.0 ha															
CW1 Citywide Park (Heritage) (1.72ha)	Parkland with focus on natural environment and cultural heritage elements. Embellishment as above with potential for viewing decks and environment/heritage interpretation.	DLL VPA	WIK	1.31ha															
PO1 Paths in Open Space (Primary and Secondary)	Linear metres to suit design.	DLL VPA	WIK	0.82 ha															
C1 – C5 Corridors	Mix of passive recreation, open grassed areas, some regeneration.	DLL VPA	WIK	49.04 ha															
PR1 Paths in Road Corridors (Primary and Secondary)	Linear metres to suit design.	DLL VPA	WIK	0.32 ha															
<b>3c. Public Domain and Landscaping</b>																			
Public domain and streetscape	DLL through sub-division process	DLL	WIK																
<b>4. TELECOMMUNICATIONS</b>																			
Lead-in network design	DLL/Operator	DLL	Commercial Agreement																
Extend off existing Telstra SCAD	Commercial agreement DLL/Operator	DLL	Commercial Agreement																
Construct MDF in dedicated structure	Commercial agreement DLL/Operator	DLL	Commercial																

Type of Facility/Service/Infrastructure	Details	Delivery Responsibility	Method of Delivery	Land	Preliminaries		Calderwood Urban Development Project (4,800 lots) DLL landholdings												
					2011	2012	2013	2014	2016	2018	2020	2022	2024	2026	2028	2030	2032	2034	2036
<b>Dwelling No. (Cumulative)</b>							50	180	600	1000	1500	2000	2400	2800	3300	3700	4200	4600	4800
Reticulation of fibre to the home/premise	Commercial agreement DLL/Operator	DLL	Agreement																
Reticulation of telecommunications	DLL through sub-division process	DLL	Commercial Agreement																
<b>5. ELECTRICITY</b>																			
Substation site identified	DLL/Integral	DLL/Integral	NA																
Lead-in and network design	DLL/Integral network planning group.	DLL/Integral	NA																
Stage 1 Albion Park Zone Substation and construct 11kV lead-in conductor	Integral	DLL/Integral	DLL/Integral																
Stage 2 Co-ordinate transfer of Calderwood Zone Substation land to Integral Energy	DLL	DLL/Integral	Commercial Agreement																
Order materials, design and construction Calderwood Zone Substation	Integral	Integral	Integral																
Construct 132kV feeder connection to Calderwood Zone Substation	Integral	Integral	Integral																
Reticulation of electricity	DLL through sub-division process	DLL	Commercial Agreement																
<b>6. NATURAL GAS</b>																			
Extend secondary gas main	Jemena	Jemena	Jemena																
Lead-in and network design	DLL/Jemena network planning group	Jemena	Jemena																
Natural gas reticulation	DLL through sub-division process	DLL	Commercial Agreement																
<b>7. POTABLE WATER</b>																			
Lead-in and network design	DLL/Sydney Water network planning.	DLL/SW	NA																
Design for water trunk system	DLL/Sydney Water network planning.	DLL/SW	NA																
Stage 1 - Construct temporary 300mm diameter water main from Sophia Street	DLL/Sydney Water network planning	SW	SW																
Construct Marshall Mount reservoir and inlet / outlet mains from Southern Towns Trunk Main	DLL/Sydney Water network planning	DLL/SW	DLL/SW																
Potable water reticulation	DLL through sub-division process	DLL	Commercial Agreement																
<b>8. WATER CYCLE MANAGEMENT</b>																			
<b>Shellharbour City Council</b>																			
Drainage infrastructure design and delivery	DLL through sub-division process	DLL	Commercial Agreement																
Wetlands/detention basins design and delivery	DLL through sub-division process	DLL	Commercial Agreement																
Initial maintenance period	Obligation through Planning Agreement.	DLL VPA	WIK																
<b>Wollongong City Council</b>																			
Drainage infrastructure design and delivery	DLL through sub-division process	DLL	Commercial Agreement																
Wetlands/detention basins design and delivery	DLL through sub-division process	DLL	Commercial Agreement																
Initial maintenance period	Obligation through Planning Agreement.	DLL VPA	WIK																
<b>9. SEWER</b>																			
Lead-in and network design	DLL/Sydney Water network planning.	DLL/SW	DLL/SW																
Stage 1 – Connection to existing carrier main	DLL/Sydney Water network planning.	DLL/SW	DLL/SW																
Stage 2 – Upgrade pumps stations, duplicate rising main for SPS 505, 500 and 498	DLL/Sydney Water network planning	SW	SW																
Stage 3 – northern catchment assessment, detailed design and needs specification for pump station and rising main	DLL/Sydney Water network planning	DLL/SW	DLL																
Construct on site pump station and rising main	DLL/Sydney Water network planning.	SW	SW																

					Preliminaries		Calderwood Urban Development Project (4,800 lots) DLL landholdings												
Type of Facility/Service/Infrastructure	Details	Delivery Responsibility	Method of Delivery	Land	2011	2012	2013	2014	2016	2018	2020	2022	2024	2026	2028	2030	2032	2034	2036
Dwelling No. (Cumulative)							50	180	600	1000	1500	2000	2400	2800	3300	3700	4200	4600	4800
Reticulation	DLL through sub-division process	DLL	Commercial Agreement		<div></div>	<div></div>													
10. TRANSPORT																			
9a. State/Regional																			
Per lot contribution to 14 road and intersection upgrades as per TMAP	State/Regional upgrades as per TMAP	DLL VPA	Monetary or WIK				<div></div>												
TMAP Upgrade 37	Illawarra Highway/Yellow Rock Road	DLL VPA	WIK		<div></div>	<div></div>													
TMAP Upgrade 29	Illawarra Highway/Broughton Avenue	DLL VPA	Monetary or WIK								<div></div>								
9b. Shellharbour City Council																			
Per lot contribution to 4 road and intersection upgrades as per TMAP	Council roads as per TMAP	DLL WIK VPA	Monetary or WIK				<div></div>												
TMAP Upgrade 32	Calderwood Road from Project to Tripoli Way	DLL VPA	Monetary or WIK													<div></div>			
TMAP Upgrade 33	Calderwood Project North-South Road southern section	DLL VPA	WIK			<div></div>	<div></div>												
TMAP Upgrade 34	Calderwood Project North-South Road central section	DLL VPA	WIK							<div></div>	<div></div>	<div></div>							
TMAP Upgrade 35	Calderwood Project North-South Road northern section	DLLVPA	WIK										<div></div>	<div></div>	<div></div>	<div></div>	<div></div>		
Transport infrastructure within development	DLL through sub-division process	DLL	Commercial Agreement		<div></div>	<div></div>	<div></div>												
9c. Wollongong City Council																			
Per lot contribution to 4 road and intersection upgrades as per TMAP	Council roads as per TMAP	DLL VPA	Monetary or WIK													<div></div>	<div></div>	<div></div>	
Transport infrastructure within development	DLL through sub-division process	DLL	Commercial Agreement													<div></div>	<div></div>	<div></div>	