

of New South Wales

Land and Environment Court

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Your Ref:



28 June 2021

NOTICE OF ORDERS MADE

Case number2018/00295957Case titleCalderwood Heights Pty Ltd v Shellharbour City Council

On 28 June 2021 the following orders (and/or directions) were made:

The Court orders:

(1) The Applicant is granted leave to amend its development application in accordance with the plans referred to in Condition A3 of Annexure "A".

(2) The Appeal is upheld.

(3) Development Application No DA 0290/2018 for the subdivision of proposed Lot 100 and Lot 101 (in the subdivision of Lot 1 in DP 608238 that is the subject of the development consent granted to DA 0289/2018), 347 Calderwood Road, Calderwood Valley, to create 455 residential lots, residual parcels for roads, open space and drainage corridors, locations and concept for one district park and one local park, demolition of the existing residence, tree removal, site remediation, bulk earth and civil works, riparian corridor rehabilitation/vegetation management and residue lot is approved subject to the conditions set out in Annexure "A".

For the Registrar

Annexure A

DETERMINATION OF DEVELOPMENT APPLICATION BY GRANT OF CONSENT

Development Application No:	DA290/2018
Development:	subdivision of proposed Lot 100 and Lot 101 (in the subdivision of Lot 1 in DP 608238 that is the subject of the development consent granted to DA 0289/2018) 347 Calderwood Road, Calderwood Valley, to create 455 residential lots, residual parcels for roads, open space and drainage corridors, locations and concept for one district park and one local park, demolition of the existing residence, tree removal, site remediation, bulk earth and civil works, riparian corridor, rehabilitation/vegetation management and residue lot
Site:	347 Calderwood Road, Calderwood, being Lot 1 in DP 608238

The above development application has been determined by the granting of consent subject to the conditions specified in this consent.

Date of determination: 28 June 2021

Date from which consent takes effect: 28 June 2021.

TERMINOLOGY

In this consent:

- (a) Any reference to a Construction, Compliance, Occupation or Subdivision Certificate is a reference to such a certificate as defined in the *Environmental Planning and Assessment Act 1979*.
- (b) Any reference to the "applicant" means a reference to the applicant for development consent or any person who may be carrying out development from time to time pursuant to this consent.
- (c) Any reference to the "site", means the land known as Lot 1 in DP 608238.

The conditions of consent are as follows:

PART A - ADMINISTRATION CONDITIONS

A1. Subdivision Works Certificate (Subdivision) & PCA Notification Environmental Planning & Assessment Act 1979 Section 81A

Before any site works, building or use is commenced, the person having the benefit of the development consent must:

- a. obtain a Subdivision Works Certificate from Shellharbour City Council or other accredited certifier,
- b. appoint a Principal Certifying Authority
- **Note:** For Torrens Title Subdivision, the appointed Principal Certifying Authority must be Shellharbour City Council.

A2. Prescribed Conditions

This development consent is subject to the prescribed conditions made under the *Environmental Planning & Assessment Regulation 2000.*

A3. Development in Accordance with Plans

The development must be in accordance with the following except as modified by conditions of this consent.

Name of Document	Prepared By	Drawing No./Revision	Drawing Document Date
Plan of Subdivision	Terry Edward Bartlett	830118588 DP-02 Sheets 1 to 10	31.03.2021
		830118588 DP-03 Sheets 1 to 7	31.03.2021
		830118588 DP-04 Sheets 1 to 2	01.04.2021
Streetscape Masterplan	Taylor Brammer Landscape Architects Pty Ltd	Project 18-010W Calderwood Heights	31.05.2021 and 6.05.2021
Landscape Cover Sheet Landscape Design Strategy Landscape Concept Plan – North Landscape Concept Plan – South Landscape Cross Sections Landscape: Local Park: O & C Landscape: Local Park Concept Plan Landscape: Local Park: Sections Landscape: District Park: O&C Landscape: District Park: Concept Landscape: District Park: Concept (N) Landscape: District Park: Concept (S) Landscape: District Park: Section (N)		LC00, Revision E LC100, Revision I LC200, Revision G LC201, Revision G LC300, Revision C LC500, Revision G LC501, Revision A LC502, Revision I LC 601, Revision A LC 602, Revision A LC 603, Revision A	6.05.21 6.05.21 6.5.21 31.3.21 6.5.21 6.5.21 5.6.21(sic) 6.5.21 6.5.21 6.5.21 6.5.21 6.5.21 6.5.21 6.5.21 6.5.21

Landscape: District Park: Section (S)		LC 604, Revision A LC 605, Revision A	6.5.20(sic) 6.5.20(sic)
Lot Mix Plan	Sitios Urban Design	Project No. 1800 Plan 01, Revision 10	13.05.21
Road and Drainage Design Plan Set	Orion Consulting Engineers	Project No. 17-105 Plan 000 Revision G	6 May 2021
General Layout Plan	Orion Consulting Engineers	Plan 001	6 May 2021
Demolition and Tree Management Plan (Sheets 1 and 2)	Orion Consulting Engineers	Plan 002-003	6 May 2021
Site Regrading Plan (Sheets 1 and 2)	Orion Consulting Engineers	Plan 004-005	6 May 2021
Site Regrading Sections (Sheets 1 – 4)	Orion Consulting Engineers	Plan 006-009	6 May 2021
Sediment and Erosion Control Concept (Sheets 1 and 2)	Orion Consulting Engineers	Plan 100-101	6 May 2021
Sediment and Erosion Control Details and Notes		Plan 102	6 May 2021
Engineering Plan (Sheets 1 – 8)	Orion Consulting Engineers	Plan 200-207	6 May 2021
Typical Cul De Sac Turning Paths	Orion Consulting Engineers	Plan 210	6 May 2021
Typical Road Cross Sections Sheets 1 – 16	Orion Consulting Engineers	Plan 300-317	6 May 2021
Stormwater Drainage	Orion Consulting Engineers	Plan 400, Plan 410- 414, Plan 420-423, Plan 430-431	6 May 2021
Retaining Walls	Orion Consulting Engineers	Plan 500-502, Plan 510-529	6 May 2021
Water Cycle Management Study	Cardno		29 August 2019
Detailed Site Investigation, 347 Calderwood Road, Calderwood Prepared for Calderwood Heights Pty Ltd	Cardno		4 September 2019
Bushfire Assessment, , Residential Subdivision, 347 Calderwood Road, Calderwood	Peterson Bushfire		23 May 2018
Bushfire Assessment, letter addressed to Olivia Lambert (Sunglow)	Peterson Bushfire		31 January 2019
Arboricultural Development Assessment Report	Moore Trees		April 2018
Biodiversity Development Assessment Report (BDAR), ,	Ecoplanning		16August 2019

Lot 1 DP608238, 347 Calderwood Road, Calderwood Proposed Subdivision		
Vegetation Management Plan, Lot 7 DP608238, 347 Calderwood Road, Calderwood, Proposed Subdivision	Ecoplanning	10 July 2018
Aboriginal Cultural Heritag Assessment	e Kelleher Nightingale Consulting	January 2019

Note: No works are permitted to occur outside the stage boundary identified on the approved plans.

A4. Land Ownership – Riparian Corridor and Environmental Reserve Lands

The riparian corridor, environmental reserve land and associated land zoned E3 Environmental Management under *State Environmental Planning Policy (State Significant Precincts) 2005* Calderwood Land Zoning Map shall remain in private ownership other than those areas shown on previously approved subdivision plans in the Calderwood Urban Development Project Area as required for local drainage or local park and district park.

Proposed Lot 1185 and Lot 2259 required for Local Park L7 and District Park D2 shall be dedicated to Council in accordance with the Calderwood Heights Voluntary Planning Agreement with Shellharbour City Council.

A5. Staging of Development

The subdivision approved by this consent shall be constructed in three stages in accordance with General Layout Plan, Plan 001, Project No. 17-105, Revision G (dated 6/05/2021).

PART B - PRIOR TO ISSUE OF SUBDIVISION WORKS CERTIFICATE

B1. Amendments to Approved Plans

The amendments described below must be incorporated in the overall development and must be reflected in any plans prepared for the purpose of obtaining a Subdivision Works Certificate:

- a. Plans are to be submitted showing extension of the limit of works boundary so as to incorporate the proposed road connections of Roads 13 and 15 to the adjoining existing roads.
- b. Plans shall be submitted to Council indicating the pedestrian trails connecting the park(s) and riparian areas in accord with the Calderwood Consolidated Concept Plan Approval.

B1A. Community Consultation

In accordance with Statement of Commitment No. 77 of the Consolidated Concept Plan, March 2011, details in relation to the on-going program of information to, and consultation with the surrounding community is required to be submitted to the Principal Certifier prior to the issue of the Subdivision Works Certificate.

B2. Approvals from other Authorities

Prior to the release of any Subdivision Works Certificate, documentary evidence is to be submitted to the Principal Certifier demonstrating that the relevant permit and/or Controlled Activity Approval has been obtained from the NRAR and the Bushfire Safety Authority from the NSW Rural Fire Service, and the Aboriginal Heritage Impact Permit from the NSW Office of Environment and Heritage.

B3. Soil and Water Management Plan (SWMP)

Prior to the issue of the Subdivision Works Certificate, the applicant must submit to and obtain the Certifying Authority approval of a Soil and Water Management Plan. The SWMP must clearly identify site features, constraints and soil types together with the nature of the proposed land disturbing activities and also specifies the type and location of erosion and sediment control measures. In addition rehabilitation techniques that are necessary to deal with such activities should be referred to.

The SWMP must take into account the requirements of Landcom's publication *Managing Urban Stormwater - Soils and Construction (2004)* thus ensuring the following objectives are achieved, namely:

- a. minimise the area of soils exposed at any one time,
- b. conserve topsoil for reuse on site,
- c. identify and protect proposed stockpile locations,
- d. preserve existing vegetation and identify revegetation techniques and materials.
- e. control surface water flows through the development construction site on a manner that:
 i. diverts clean run-off around disturbed areas.
 ii. minimises slope gradient and flow distance within disturbed areas.
 iii. ensures surface run-off occurs at non-erodible velocities.
 iv. ensures disturbed areas are promptly rehabilitated.
- f. trap sediment on site to prevent off site damage. Hay bales are not to be used as sediment control devices. To ensure regular monitoring and maintenance of erosion and sediment control measures and rehabilitation works until the site is stabilized (includes landscaping).
- g. specifies measures to control dust generated as a result of construction activities on site.
- h. temporary sediment ponds must be fenced where the batter slope exceeds 1 vertical to 5 horizontal,
- i. design scour protection for the 10 year ARI event at all inlet and outlet structures.
- j. including measures to prevent the tracking of sediment off the site.

B4. Retaining Walls and Site Regrading

Retaining wall designs must be submitted to the Certifying Authority prior to the issue of a Subdivision Works Certificate.

Where a retaining wall exceeds 600mm in height, the wall must be designed by a practicing structural engineer and a Subdivision Works Certificate must be obtained prior to the commencement of work on the retaining wall.

All retaining walls must be located wholly within private property, including footings and agricultural drainage lines.

The retaining walls approved by this consent shall be of masonry material unless otherwise approved by Council, and shall taper down to finished ground level in locations where the walls to be constructed alongside residential boundaries extend forward of the dwelling house building line to minimise the visual impact in the streetscape.

All of the retaining walls approved by this consent shall be finished in earth tone colours, and must not be left with a natural concrete finish in locations where they are visible from the public domain.

Retaining walls are to be no higher than 2 metres in residential lots or as detailed on the Road and Drainage Design Plans prepared by Orion Consulting, Revision G dated 6/5/21.

Documentary evidence must be provided to the Principal Certifying Authority demonstrating that the above has been achieved within the development site.

Residential lots and/or road lots adjacent to adjoining land (adjoining Stages) must have a transitional grade to match the natural/existing grade of the adjacent land or as detailed on the Road and Drainage Design Plans prepared by Orion Consulting, Revision G dated 6/5/21.

B5. Bush Edge Buffer Allotments

Lots 1102 - 1105 inclusive and Lots 1176 – 1183 inclusive are within the Bush Edge Buffer Overlay under the Calderwood Development Control Strategy (CDCS). Detailed Building and Design Guidelines (BDG's) are to be submitted to and approved by Council prior to the release of the Subdivision Works Certificate.

The approved BDG's will need to be included as a restrictive covenant on the bush edge buffer overlay affected allotments.

B6. Long Service Levy

The Long Service Levy must be paid prior to the issue of the Subdivision Works Certificate.

Note: This is a levy imposed by the NSW Government and administered by the Long Service Payments Corporation for the purpose of long service payments to building and construction workers.

B7. Inter-Allotment drainage

Inter-allotment drainage must be provided to dispose of stormwater from those allotments that do not have fall to the street to which the lot fronts. Inter-allotment drainage is to cater for the 1 in 20 year Average Recurrence Interval. Details to this effect shall be provided to the Principal Certifier for review and approval prior to the release of the Subdivision Works Certificate.

B8. Initial Geotechnical Report

A geotechnical report, prepared by a suitably qualified and experienced geotechnical engineer must be submitted to the Certifying Authority for approval prior to the issue of the Subdivision Works Certificate.

The report must cover, but not be limited to the following:

- a. extent and stability of proposed embankments including those acting as retarding basins,
- b. recommended Geotechnical testing requirements,
- c. level of geotechnical supervision for each part of the works as defined under AS 3798 2007 Guidelines on Earthworks for Commercial and Residential Developments or subsequent amendments,
- d. an analysis of the level of risk to existing adjacent structures/buildings including the scenario of a construction contractor using vibratory rollers anywhere within the site the subject of these works. In the event that vibratory rollers could affect adjacent structures/buildings, high risk areas must be identified on a plan and indicate that no vibratory rollers shall be used within that zone,
- e. the impact of the installation of services on overall site stability and recommendations on short term drainage methods, shoring requirements and other remedial measures that may be appropriate during installation,
- f. the recommended treatment of any unstable areas within privately owned allotments;
- g. requirement for subsurface drainage lines,
- h. overall assessment of the engineering plans for the proposed development and their suitability in relation to the site's geotechnical characteristics.

B9. Road Network Layout

The road design must comply with the 'Calderwood Urban Development Project Consolidated Development Control Strategy (CDCS)' by JBA Urban Planning Consultants - March, 2018 or subsequent amendments.

Details of the above are to be provided to the satisfaction of the Certifying Authority prior to the issue of the Subdivision Works Certificate.

B10. Road Design

The road design must comply with the following:

- a. the grading and layout of all roads and lots must not allow for trapped low points and in addition ensure that overland flow is passed safely over public land,
- b. the road pavement must be designed with one layer of asphalt having a minimum thickness of 50 mm AC 14. The pavement design for the proposed roads must be carried out by a qualified Geotechnical/Civil engineer in accordance with *AUSTROADS Guide to Pavement Technology*,

- c. all vertical and horizontal alignment of all streets and all street intersections within the development must have adequate sight distance provided in accordance with *AUSTROADS* requirements,
- d. the geometric design of all roads, traffic facilities, intersection treatments, mid-block devices and entry features must be such as to allow an 8.8m design vehicle and a 12.5m check vehicle to manoeuvre in order to enter and leave each road in a forward direction in accordance with Section 5 of Austroads Guide to Road Design Part 4: Intersections and Crossings,
- e. the relevant drawings must be annotated and properly referenced showing compliance with this condition. The drawings must be submitted with application for a Subdivision Works Certificate for approval by the Certifying Authority.

B11. Structural Design of Deep Pits

All pits deeper than 0.9 metres must be designed by a certified structural engineer and be in accordance with *AS3600-2009*. Pits deeper than 1.2 metres must have **galvanised steel step irons (plastic coated black steel step irons will not be accepted)** and pits deeper than 1.8 metres are to be reinforced concrete. Step irons at 300mm interval spacing from bottom of pit. Top step minimum 500mm below top surface level. Details to this effect shall be incorporated on the detailed drainage design that is submitted to the certifying authority for the Subdivision Works Certificate.

B12. Detailed Drainage Design

A detailed drainage design of the site must be submitted and approved prior to the release of the Subdivision Works Certificate. The detailed plan must:

- a. be generally in accordance with 347 Calderwood Road, Calderwood Road & Drainage Design Engineering Plans Sheets 1 to 8 (Project No. 17-105, Plans 200 to 207, Revision G prepared by Orion Consulting on 6/05/2021,
- b. drain to the natural watercourse,
- c. indicate the method of disposal of all stormwater and must include existing ground levels, finished surface levels on all paved areas, estimated flow rates, invert levels and sizes of all pipelines,
- d. be to the satisfaction of the Certifying Authority,
- e. be designed in accordance with Shellharbour City Council's Development Control Plan and the Shellharbour Drainage Design Handbook
- f. overflow drainage paths are to be provided and be designed to cater for 1 in 100 year Average Recurrence Interval storm event,
- g. comply with Council's *Shellharbour Development Control Plan* unless variation is specifically noted and approved on DA concept drainage plan,

B13. Stormwater Discharge to Natural Watercourse

Stormwater discharge point to the natural watercourse must be protected against erosion.

Details are to be submitted and be to the satisfaction to the certifying authority prior to the release of the Subdivision Works Certificate.

B14. Road and Drainage Plans

Road and drainage plans, must be prepared by a suitably qualified Engineer, in accordance with Council's *Shellharbour Engineering Code*. The plans must be submitted to the Certifying Authority for approval prior to the release of the Subdivision Works Certificate. All road and drainage work must then be constructed in accordance with Council's construction standards and approval at no cost to Council.

All stormwater pipes within the road reserves and within drainage easements intended to be dedicated to Council must be installed generally to the HS3 standard in accordance with the current edition of AS 3725 - Design for Installation of Buried Concrete Pipe.

B15. Structural Capacity of Stormwater Pipes

Pipes under buildings shall be structurally designed to withstand all applied forces. Pipes with a grade of greater than 12% require anchor blocks at the top and bottom of the inclined section and at a maximum interval of 3 metres. Details to this effect shall be incorporated on the detailed drainage design that is submitted to the certifying authority for the Subdivision Works Certificate.

B16. On site Detention & Tank Details

On site detention must comply with the following:

- a. storage must be provided for stormwater runoff from the development. The storage must be designed in accordance with Shellharbour City Council's Requirements for On-Site Detention Storage,
- b. full routing and runoff calculations must be submitted with the design and to the satisfaction of Council's requirements. The use of triangular hydrographs to determine detention storage is unacceptable and,
- c. the above requirements must be provided with the application for a Subdivision Works Certificate for approval by the Certifying Authority.

B17. Biodiversity Offset Credits

Prior to any impact on biodiversity and the issue of any Subdivision Works Certificate, the retirement of biodiversity offset credits must be documented and provided to council. The offset obligation must be consistent with the Ecoplanning Biodiversity Development Assessment Report (BDAR), dated 16 August 2019, Final credit calculations. A private certifier cannot assume the role of the consent authority in confirming compliance with biodiversity offset conditions and obligations;

- a. **Ecosystem credits-** PCT 838 Forest Red Gum Thin leaved Stringybark grassy woodland on coastal lowlands, southern Sydney Basin Bioregion- Total credits= 63;
- b. Species credits- PCT 838 Forest Red Gum Thin leaved Stringybark grassy woodland on coastal lowlands, southern Sydney Basin Bioregion- Large-eared Pied Bat-Total credits= 92;

- c. Retirement of credits: proponent provides evidence to council in form of a credit retirement report issued by OEH confirming credit transactions. Council will confirm credit transaction corresponds to a like for like credit of the appropriate number from an appropriate location and/or;
- d. Payment to the Biodiversity Conservation Fund: proponent provides evidence to council in form of a section 6.33 of the Biodiversity Conservation Act, a Statement Confirming Payment into the Biodiversity Conservation Fund issued by the Biodiversity Conservation Trust. The statement will indicate the number and class of credits that the payment corresponds to and any related development application reference.

B18. Dewatering of Dam

A Dewatering Management Plan must be prepared and approved by Council prior to issue of any Subdivision Works Certificate.

The Dewatering Management Plan must include the following:

- a. Quality and quantity of water to be released;
- b. Where water will be discharged to and at what rate;
- c. Any impacts on downstream biodiversity;
- d. Sediment and erosion controls;
- e. Relocation of displaced fauna;
- f. Treatment of weed species prior to dewatering (if applicable);
- g. Testing, treatment and disposal of sediment removed from dam; and
- h. A risk assessment including ameliorative measures for problems encountered during dewatering (eg increased turbidity downstream).

B19. Water Quality Treatment Basins 1 and 2

Detailed plans and documentation are to be provided for Water Quality Treatment Basins 1 and 2 identified in the Civil Plans Set Orion Consulting Engineers, Demolition and Tree Management Plan Sheet 1 prior to the issue of Subdivision Works Certificate.

Information is to be submitted to demonstrate that the Water Quality Treatment basins meet the Pollutant Removal Targets as per the Calderwood Urban Development Project Section 75W Application Watercycle and Flood Management Strategy Updates prepared by J.Wyndham Prince for Lendlease dated 13th July 2018.

Detailed Plans and documentation of Basins 1 and 2 are to be consistent with the Natural Resource Access Regulator (NRAR) Guidelines for controlled activities on Waterfront land, including but not limited to:

Online detention for 1st and 2nd order streams should be designed in accordance with NRAR Riparian Corridor Guidelines:

- Be dry and vegetated
- For temporary flood detention only
- With no permanent water holding
- Have an equivalent VRZ for the corresponding watercourse order
- Not be used for water quality treatment purposes.

B20. Bio-basin Management

Draft Bio-basin Management, Operation, Maintenance and Monitoring Manual/s ('Manuals') for the permanent water quality facility must be provided for approval to Council and the Principal Certifying Authority prior to the issue of any Subdivision Works Certificate. The Manuals must be prepared to Council's satisfaction by a suitably qualified person in accordance with Council's Engineering Specifications and water quality objectives.

B21. Fauna Habitat/Hollow Bearing Trees

Hollow bearing trees (HBT) have been identified in the BDAR by Ecoplanning 16 August 2019 and Moore Trees Aboricultural Report for 347 Calderwood Rd dated April 2018. A suitably qualified ecologist must survey and identify the HBT proposed for removal and document the type and number of habitat hollows (per tree to be removed). A report must be prepared and approved by Council that outlines the type of habitat boxes to be installed, locations, target species and how the boxes will be managed in perpetuity prior to the issue of any Subdivision Works Certificate and any impact on biodiversity.

Species specific habitat boxes must be provided at a ratio of 1:1.

Details of nest box type, location, monitoring and maintenance requirements must be documented in the Vegetation Management Plan.

B22. Habitat Boxes

Habitat boxes as outlined in Condition B21 - Fauna Habitat/Hollow Bearing Trees must be installed prior to the Subdivision Works Certificate. Habitat boxes are to be provided at a ratio of 1:1.

The location of the habitat boxes must be recorded using a Global Positioning System (GPS), and a map showing the position of these must be included in an updated Vegetation Management Plan.

B23. Vegetation Management Plan and Bushfire Assessment

An updated Vegetation Management Plan is required to be submitted and approved prior to the Subdivision Works Certificate. The purpose of the updated Management Plan is to include additional information listed in the Conditions of Consent, including but not limited to:

- a. Area of compensatory planting for the loss of Environmentally Sensitive Land.
 - The area of compensatory planting is to be equivalent to the area of ESL removed as part of the application including but not limited to earthworks, civil works and water quality basins and is to be provided within the Lot. The Vegetation Management Plan and Bushfire Assessment Report will be required to be updated with this information. To that end, the Bushfire Report is to be updated with changes from the increase in vegetation from the compensatory plantings for the loss of Environmentally Sensitive Land to be identified in the updated Vegetation Management Plan.
- b. Habitat box type, location, monitoring and maintenance requirements.
- c. Appropriate revegetation of part Lot 1184 being Environmentally Sensitive Land.

B24. Contamination

All recommendations from the Cardno Detailed Site Investigation dated 4 September 2019 are to be carried out, including but not limited to:

- a. Areas of asbestos impact within PAEC03 and PAEC04 have not been delineated in their entirety. Delineation of each area is required to determine the lateral and vertical extent of impact, which could be undertaken prior to or concurrently with any remedial works (read below).
- b. A Remedial Action Plan (RAP) must be prepared prior to any Subdivision Works Certificate to provide a suitable remedial approach to manage asbestos, copper and zinc impacted fill materials and render the site suitable for the proposed land use. Based on the nature of the identified asbestos contamination the plan should consider:
 - i. The need for a SafeWork NSW Class-A licensed removalist to undertake the works and the need for a SafeWork NSW Licensed Asbestos Assessor to validate any remedial works.
 - ii. Controls appropriate to the removal of friable asbestos impacted soils, including but not limited to wetting of soil and covering of stockpiles.
 - iii. An appropriate validation program to ensure that impacts have been appropriately removed from the site. All remedial and validation works must be completed by a suitably qualified and experienced environmental professional.
- c. Any future works on the site should be undertaken with an Asbestos Management Plan (AMP) including an Unexpected Finds Protocol (UFP) to be provided prior to any Subdivision Works Certificate which considers risk to site workers from asbestos impacted soils and the intended future land use.
- d. A hazardous building material survey should be undertaken prior to the demolition of any onsite buildings and structures.
- e. PAEC06 was excluded from the assessment as the full extent of proposed road works was unknown at the time of the investigation. Should any future development footprint include Calderwood Road and PAEC06 the area should be assessed prior any Subdivision Works Certificate, disturbance and earthworks.

Should contamination be uncovered during the course of development works, mitigation and management measures in line with SEPP 55- Remediation of Land, requirements must be put in place. These must be identified in the builder's Construction and Environmental Management Plan to ensure that contaminated material is identified and removed in accordance with SafeWork NSW and Environmental Protection Authority (EPA) guidelines.

B25. Street Tree Inspection Fee

The developer must lodge with Council an inspection fee in accordance with Council's *Fees and Charges* prior to the issue of the Subdivision Works Certificate for:

- a. street tree inspection of completed landscape works, and
- b. street tree inspection following completion of the maintenance period.

B26. Street Tree Bond

The developer is required to provide a bond to the value of the street tree landscape works.

The street tree bond will be returned following a 12 month maintenance period commencing from the date of the issue of the Practical Completion Certificate, provided the street trees remain in a satisfactory condition. In the event that any street trees are found damaged, dying or removed, Council will have the option to retain the whole or part of the bond. The developer must notify Council for a reinspection of the street trees.

B27. Street Tree Plan

A detailed street tree plan in accordance with Condition B28 of this consent, in addition to the local park landscape plan, must be lodged with Council prior to any commencement of landscape works. In this regard, one hard copy and an electronic copy of the street tree plans prepared by a Landscape Architect must be submitted to the Council prior to the release of the Subdivision Works Certificate.

B28. Street Trees

The developer is required to install street trees on Council's footpath reserve as follows:

- a. one tree per lot and two trees per corner lot
- b. planted, at least, 3m either side of the driveway and street light poles and 2m from services, stormwater outlets and signage.
- c. a minimum 15 metres from pedestrian crossings and traffic signals.
- c. trees must be set back a minimum 900mm from the back of the kerb or midway between the footpath and kerb. Where the tree is less than 900mm from the footpath, root barriers must be installed.
- d. a minimum 1000mm width x 1500mm depth timber edging installed at the base of the tree constructed from the back of the kerb
- e. 2 x hardwood stakes with 50mm Hessian ties, fixed in a figure 8, to support each tree
- f. minimum 75mm depth of organic mulch applied a minimum 600mm diameter surrounding the base of the trunk

B29. Electricity Substations

Any substation installed must be screened from all street frontages and public places by the use of screen enclosures and landscaping where permitted by Endeavour Energy. Details are to be submitted to Council on the location and method of screening in the Landscape Plan required by Condition No. B27.

No substations are permitted on any future public land.

B30 - Voluntary Planning Agreement

Prior to issue of Subdivision Works Certificate, the Proponent must enter into a Planning Agreement with Shellharbour City Council (Council) under the *Environmental Planning and Assessment Act 1979.* The Planning Agreement must be consistent with the terms of the offer made by the Applicant in connection with the development application as set out in the letter from the Applicant to Council dated 13 May 2021, a copy of which is annexed and marked 'A'.

PART C - PRIOR TO COMMENCEMENT OF WORKS

C1. Site Meeting

A site meeting with Council's Engineer, Environment Officer, Planning Officer, the proponent and the contractor must be held not less than 14 days prior to the commencement of work on site. The site meeting is subject to Council's Fees and Charges.

C2. Construction Traffic Management Plan (CTMP)

Prior to the commencement of works, a CTMP detailing vehicle routes, number of trucks, hours of operation, access arrangements, impact on pedestrians and traffic control must be submitted to and approved by the Certifying Authority.

It is the developer's responsibility to adequately inform/brief for construction workers, subcontractors and supervisors to ensure that the Construction Traffic Management Procedures are adhered to at all times.

C3. Road Construction and Road Drainage Construction

The site manager must arrange for a satisfactory inspection by Shellharbour City Council of the following works:

- a. all road drainage works prior to backfilling of the work and,
- b. all road construction inspections as per Council's *Shellharbour Engineering Design Code*.

C4. Material Compliance

All materials proposed for construction are to comply with the Shellharbour Engineering Code. Material data sheets and conformance documentation is to be submitted and approved to the satisfaction of the Principal Certifier.

C5. Shellharbour Engineering Design Code

All works to be dedicated as a Council asset must be installed/constructed in accordance with Council's *Shellharbour Engineering Design Code*.

C6. Soil and Water Management Plan Implementation (SWMP)

The measures required in the Soil and Water Management Plan approved by the Certifying Authority must be implemented prior to the commencement of works.

C7. Dilapidation Report

It is the applicant's responsibility to notify Council of any existing damage to public areas in the vicinity of the development site through the submission of a Dilapidation Report. The report must be supported with suitable photographic records. This information must be submitted to Council prior to the commencement of work.

C8. Site Management Plan

Prior to the commencement of works, the applicant must submit to and obtain approval for a construction and site management plan from the Certifying Authority that clearly sets out the following:

- a. what actions are proposed to ensure safe access to and from the site and what protection will be provided to the road and footpath area from building activities, crossings by heavy equipment, plant and materials delivery and static load from cranes, concrete pumps and the like,
- b. the proposed method of loading and unloading excavation machines, building materials and formwork within the site,
- c. the proposed areas within the site to be used for the storage of excavated material, construction materials and waste containers during the construction period,
- d. sediment and erosion control measures as per Landcom's publication 'Managing Urban Stormwater Soils and Construction (2004)' also known as the 'Blue Book' or subsequent revisions.
- e. how it is proposed to ensure that soil/excavated materials are not transported on wheels or tracks of vehicles or plant and deposited on the roadway and,
- f. the proposed method of support to any excavation adjacent to adjoining buildings or the road reserve. The proposed method of support is to be certified by an appropriately qualified and experienced engineer.

C9. Construction Environmental Management Plan (CEMP)

Prior to commencement of works a Construction Environmental Management Plan must be prepared and provided to the PCA, including but not limited to:

- a. Sediment and erosion controls,
- b. Management of fuels and chemicals,
- c. the proposed areas within the site to be used for the storage of excavated material, construction materials and waste containers during the construction period,
- d. Construction noise controls,
- e. Dust control measures,
- f. Emergency and evacuation procedures in accordance with Australian Standard 1940-2004,
- g. Waste management,
- h. Cultural Heritage stop work protocol,

The person responsible for acting on this consent is to ensure the site management plan is to be implemented at all times during construction works occuring for the subdivision approved by this consent.

C10. Ecological Impact Management

The following mitigation and management measures must be incorporated into the proposed development prior to commencement of work to ensure that flora and fauna impacts are addressed:

a. The boundaries of impact areas must be clearly delineated using exclusion fencing to prevent encroachment into surrounding bushland according to the proposed earth works boundary of the BDAR, Figure 5.2: Proposed impacts, including residential lots, access

roads and a park. Exclusion fencing must be installed prior to any cut and fill works occurring. This fencing must be located no closer than the drip line of individual trees. The fencing must be designed to stop traffic movements over the root zones, restrict canopy damage and stop spoil from being spread over the basal area of trees to be retained, and

- b. Environmental protection works and measures must be established and monitored to ensure that land and associated vegetation within the E2/E3 zone is protected during construction.
- c. All mitigations outlined in the Ecoplanning BDAR, 6.3- Mitigating and managing impacts on biodiversity values dated 16 August 2019 are to be followed and documented.

C11. Arboricultural Works

Tree protection measures to protect retained trees, must be implemented in accordance with the recommendations in the Arboricultural Development Assessment Report (Moore Trees, April 2018).

Prior to commencement of works a Project Arborist must be appointed and must confirm the correct trees to be retained or removed.

The Project Arborist must oversee the arboricultural related works during the construction stage and prior to any tree removal works.

Trees to be removed must be clearly marked prior to clearing.

Marking of the trees as per the Ecoplanning BDAR dated 16 August 2019, Figure 5.2: Direct impacts of the proposal and Demolition and Tree Management Plan –Project number 17-105, Milestone DA, Plan 002, Revision A and Project number 17-105, Milestone DA, Plan 003, Revision A inclusive.

Only trees to be removed are to be marked. All contractors on the site must be made aware of relevance of tree markings.

In the event that any of the trees not identified for removal are damaged, a qualified Arborist must be contacted as soon as possible. The Arborist is required to recommend remedial action so as to reduce any long term adverse effect on the tree's health. This remedial action must commence as soon as practically possible.

Existing trees and or vegetation nominated for removal must be removed prior to any construction works. Any environmental and exotic weed vegetation must be removed from the development site and must not be used for mulch purposes.

All trees to be removed that contain fauna habitat must be identified and:

- a. An ecologist must be on site during their removal;
- b. Immediately prior to the clearing of the vegetation the project ecologist must conduct an inspection of any suitable ground debris, shrubs and accessible hollows. These inspections must be conducted to determine, and collect if possible, any sheltering or nesting animals,
- c. All trees to be removed must be felled by a qualified arborist,
- d. Hollow bearing trees and stags must be felled by an arborist in one to two metre sections, beginning at the top of the crown and lowered to the ground for inspection by the ecologist on site. Lengths cut from the tree shall be in a manner that will preserve the hollow(s). Once felled, the ecologist should inspect all hollows for sheltering animals,

- e. Any animals present within the tree hollows must be collected and released on dusk, or under conditions that equate to the life cycle requirements of the species collected, within those portions of the site that are to be retained in perpetuity,
- f. If any animals are present, <u>works must cease</u> and South Coast Wildlife Rescue must be contacted on 0418 427 214 or WIRES on 1300 094 737 to arrange collection and relocation of animals,
- g. Relocated natural hollows must be included, GPS location recorded, mapped and incorporated in the VMP, and
- h. The project ecologist must provide Council with a Letter Report confirming that the procedures specified have been complied with, along with notes on any fauna encountered and the outcome of salvage.

C12. Waste Management

A Waste Management Plan must be submitted to Council prior to the commencement of any works.

C13. Street Tree Installation

Street tree installation to be carried out by the developer must be withheld from planting until individual streets are 70% developed with residences to prevent damage and destruction to street trees throughout the dwelling construction phase.

PART D - DURING DEMOLITION/ CONSTRUCTION WORKS

D1. Hours of Work

Standard construction hours must be maintained with approval sought from Council before undertaking construction outside of these hours.

Noise generating activities including demolition, construction, excavation and delivery of equipment and materials, must only be carried out between:

- a. 7am to 5pm Mondays to Friday, and
- b. 8am to 1pm Saturdays

Unless otherwise agreed to by Council in writing. Work must not be carried out on Sundays or public holidays.

D2. Cultural Heritage

A stop work protocol must be included in the CEMP and implemented for any potential heritage items or items of aboriginal cultural significance found during excavation including:

- a. cease work immediately if any Aboriginal objects are found/uncovered,
- b. secure the site, and
- c. inform Office of Environment and Heritage and Shellharbour Council's Aboriginal Liaison Officer immediately.

D3. Injured Wildlife

Active areas of trenching or excavation should be inspected for fauna (especially frogs, snakes and lizards) prior to works commencing each day.

WIRES (1300 094 737) or South Coast Wildlife Rescue (0418 427 214) must be contacted in the event of any trapped or injured wildlife discovered during works.

D4. Stormwater Conduit in Road Reserve and Connection with Kerb

Where the existing connection point is not available in either normal kerb and gutter or roll type kerb and gutter, the kerb must be saw cut to provide for the connection of the pipe. The saw cut must ensure that a minimum of 50mm of cover is available on all three sides of the pipe to permit adequate strength and thickness for the concrete finish.

Galvanized steel pipe, sewer grade UPVC pipe or 'Corflow' spirally reinforced PVC pipe must be used from the property boundary to the kerb and gutter. The kerb and gutter connection must be a 100mm diameter galvanised steel circular section for 150mm kerb and gutter or a 150mm x 50mm galvanised rectangular steel section for roll kerb ensuring that the galvanised section is fully encased by concrete.

A maximum of two pipes of 100mm diameter may be used to discharge to the kerb and gutter.

D5. Waste Management

The management of waste must comply with the approved Waste Management Plan. All receipts such as waste disposal dockets must be retained. Any variations to the Waste Management Plan must have prior written approval of Council.

D6. Maintenance of Soil and Water Management Plan (SWMP)

The soil and water management controls must be maintained at all times during each stage of the development and checked for adequacy daily. The controls must not be removed until the development is completed and the disturbed areas have been stabilised.

Maintenance must include but is not limited to ensuring:

- a. all sediment fences, sediment traps and socks are properly placed and are working effectively and,
- b. drains, gutters and roads are maintained clear of sediment at all times.

Note: It is an offence under the *Protection of the Environment Operations Act 1997* to allow soil or other pollutants to fall or be washed into any waters or be placed where it is likely to fall or be washed into any waters. Substantial penalties may be issued for any offence.

D7. Lots and Site Filling

All lot and site filling must be performed under level 1 Geotechnical supervision in accordance with *AS 3798-2007* or subsequent amendments.

D8. Traffic Committee - Signposting and Line Marking Plan

Prior to the implementation of the Signposting and Line Marking Plan, the Plan must be lodged with the City of Shellharbour Traffic Committee for written approval. This plan must detail all facilities, signage and line-marking required within and surrounding the development.

D9. Street Lighting

The developer must submit a Public Lighting Design Brief to Council for approval for the provision of street lighting on all new public roads dedicated to Council. A street lighting design plan must be prepared by an accredited service provider for contestable works in NSW and submitted to the Energy provider for approval prior to construction. All street lighting must comply with the electricity service provider Street Lighting Policy and illumination requirements. All costs associated with the installation of street lighting must be borne by the developer.

D10. Open or Occupy a Roadway or Footpath (Section 138 Roads Act 1993)

Prior to any physical works within Council's road reserve such as (but not limited to) connecting proposed roads to existing adjoining roads installing a driveway or connecting stormwater facilities you will need to apply for approval under Section 138 of the *Roads Act*. There is no additional cost as this is paid for at the time of development application.

To lodge your application you will need to submit the following information:

- a. detailed engineering drawings of the proposed works in the road and footpath area,
- b. traffic management plan,
- c. provision of public risk insurance and,
- d. details of timing and length of works.

D11. Service Conduits

Services conduits must be placed across carriageways prior to the placing of any pavement material. In this regard, a copy of the services plans must be submitted to the Principal Certifier prior to the placement of pavement material. Alternatively, the services crossings must be under bored.

D12. Geotechnical Testing - Drainage

Geotechnical testing must be carried out and results submitted to the Certifying Authority to verify that the pipe trench bedding and backfill complies with the requirements outlined in Australian Standard *AS 3725 - Design for Installation of Buried Concrete Pipe*. Geotechnical testing must verify that the pipe trench bedding and backfill complies with the requirements for HS3 bedding/backfill must be performed at the rate of one test per 50m of pipeline with not less than two tests in any section of pipe exceeding 25m in length.

D13. Construction Environmental Management Plan (CEMP)

The approved CEMP must be followed throughout the construction phase.

D14. Remedial Action Plan (RAP)

The approved Remedial Action Plan must be followed throughout the construction phase.

D15. Asbestos Management Plan (AMP) including an Unexpected Finds Protocol (UFP)

The Asbestos Management Plan and Unexpected Finds Protocol must be followed during construction.

D16. Imported Fill Material

Any imported fill to be used on site must be:

- a. VENM (virgin excavated natural material) classified as such in accordance with the Waste Classification Guidelines, Part 1: Classifying Waste (EPA 2014), or ENM (excavated natural material) meeting the requirements of the Excavated Natural Material Exemption 2014, and compatible with the existing soil characteristics of the site; or
- b. Any other waste derived material the subject of a resource recovery exemption under Part 9, Clause 91 and 92 of the Protection of the Environment Operations (Waste) Regulation 2014- 'The coal washery rejects exemption 2014' that is permitted to be used as fill material.

Excavated material from the site can only be reinstated if it is supported by National Association of Testing Authorities testing to confirm National Environment Protection Measure suitability for the proposed land use.

Any waste derived material the subject of resource recovery exemption received by the development site must comply with the conditions of the EPA exemption and be accompanied by documentation as to the materials compliance with the exemption conditions and must be provided to the principle Certifying Authority on request. Note 7.3 of the Coal Wash Rejects Exemption 2014 states the consumer can only apply coal washer rejects to land where it is not applied in or beneath water, including groundwater. With regard to this, coal wash must not be applied below the upper bank of any riparian area.

The intent of this requirement is to ensure that imported fill is of an acceptable standard for environmental protection purposes.

Trenching or open areas of excavation should be covered when left overnight.

Note: The application of waste derived material to land is an activity that may require a license under the Protection of the Environment Operations Act. However, a license is not required by the occupier of the land if the only material applied to the land is virgin excavated natural material or waste derived material the subject of a resource recovery exemption under Part 9, Clause 91 and 92 of the Protection of the Environment Operations (Waste) Regulation 2014.

D17. Ecological Impact Management

The following mitigation and management measures must be incorporated into the proposed development during construction to ensure that flora and fauna impacts are addressed:

- a. Storage areas must be located away from drainage lines to minimise risk of pollution and adverse impact to aquatic ecosystems,
- b. A sterile cover-crop must be used to stabilise soil once earthworks have been completed,
- c. Installation of sediment and runoff control measures to prevent runoff entering adjacent bush land areas consistent with the Landcom Blue Book (Landcom, 2004),
- d. Weeds within the construction site must be controlled appropriately according to their class,
- e. Clearing vegetation must only be conducted within the designated impact area,
- f. Fencing must be used to prevent damage to the root zones of trees to be retained,
- g. Wash down machinery before entering the site to limit weed spread, and

h. Ongoing weed control must be undertaken along the length of the works and around the residential development to reduce the impacts of edge effects on adjacent vegetation.

Environmental protection works and measures must be established and monitored to ensure that land and associated vegetation within the E2/E3 zones are protected during construction.

Pre-start checks and/or inductions must be conducted with all contractors on the site to communicate the sensitivity of the vegetation.

D18. Vegetation Management Plan

Implementation of the Vegetation Management Plan must commence upon receipt of any Subdivision Works Certificate.

During the construction phase, annual reports documenting implementation of the Vegetation Management Plan must be prepared by a suitably qualified person and provided to Council and the Principal Certifying Authority. Council may request site inspections to observe progress of Vegetation Management Plan implementation.

Ongoing weed control must be undertaken along the length of the works and around the residential development to reduce the impacts of edge effects on adjacent vegetation.

D19. Waste Management

The management of waste must comply with the approved Waste Management Plan. All receipts such as waste disposal dockets must be retained (refer Part E). Any variations to the Waste Management Plan must have prior written approval of Council.

D20. Acoustics

Equipment and machinery must be well maintained and operated in a correct manner.

Standard construction hours will be maintained with approval sought from Council before undertaking construction outside of these hours.

D21. Earthworks – Cut, Fill and Grading

The maximum grading of cut or fill shall be 45 degrees (1:1) where there is no retaining wall or no other method of stabilising cut or fill during construction. The maximum depth of fill on any portion of the allotment shall not exceed the depth shown on the approved Civil Engineering Plans.

D22. Demolition - SafeWork New South Wales, Australian Standard 2601 & Work Health & Safety Act 2011

All demolition work must:

- a. be carried out in accordance with the requirements of SafeWork NSW
- b. be carried out in accordance with the Work Health & Safety Act 2011
- c. be carried out by a SafeWork NSW licensed contractor where demolition work involves the removal of any materials containing asbestos, and
- d. be carried out in accordance with the provisions of AS 2601-2001: The Demolition of

Structures (or subsequent edition/s).

PART E - PRIOR TO PRACTICAL COMPLETION CERTIFICATE

E1. Practical Completion Certificate

Prior to the issue of a Practical Completion Certificate by the Certifying Authority, the Applicant must submit satisfactory Works As Executed Plans, CCTV of stormwater drainage and evidence of all other testing and construction works in accordance with the approved Subdivision Works Certificate Plans and Council's Subdivision Code.

The Practical Completion Certificate must be requested by the Applicant in writing.

E2. Street Tree Inspection

All street trees must be inspected by Council prior to the commencement of a 12 month maintenance period. It is the responsibility of the developer to notify Council for the street tree inspection.

- a. be located a minimum of 3000mm out from the dripline of the tree/vegetation,
- b. have a minimum height of 1500mm,
- c. be clearly marked at all times with the use of high visibility plastic hazard tape.

The fenced area is a protection zone and is classified a 'no development zone' the area must not have any buildings, footings, excavation works, retaining walls, services, hard surfaces and any level changes.

Where vehicle/machinery access is required to cross the tree protection zone a 350mm layer of organic mulch must be placed over the entire area for the duration of the construction period to reduce compaction.

E3. Completion of Landscape Works other than Local Park L7 and District Park D2

All landscape works must be landscaped in accordance with the approved Landscape Plan prior to the issue of a Landscape Practical Completion Certificate. Any variations to the design or species used must be authorised by Council in writing before any changes are made.

The completed landscape soft works and hard works must be inspected by Council prior to the issue of a landscape practical completion certificate. It is the responsibility of the developer to notify Council for the landscape inspection.

E4. Landscape Maintenance Period

To ensure establishment of the landscape, the completed works must be maintained for a 3 year period following the issue of the Landscape Practical Completion Certificate. It is the responsibility of the developer to ensure that any defective landscape works shall be rectified/replaced at the conclusion of the maintenance period in accordance with the approved landscape plan.

E5. Street Tree Handover Inspection

The street tree works on land to be dedicated to Council requires a handover inspection to be carried out at the end of the street tree maintenance period. In this regard the developer is to notify Council to arrange an inspection with Council and the developer. Council will take full

maintenance responsibility of all street trees following a satisfactory result at the end of the maintenance period.

E6. Street Tree Bond

The street tree bond will be returned following a 12 month maintenance period commencing from the date of the issue of the Practical Completion Certificate, provided the street trees remain in a satisfactory condition. In the event that any street trees are found damaged, dying or removed, Council will have the option to retain the whole or part of the bond. The developer must notify Council for a reinspection of the street trees.

PART F - PRIOR TO THE ISSUE OF SUBDIVISION CERTIFICATE

F1. Consolidation of Special Riparian Environmental Corridor and Environmental Reserve lands

Prior to the issue of the Subdivision Certificate of this development application, and to enable the consolidation of the Special Riparian Environmental Corridor and Environmental Reserve lands (as identified on the special riparian environmental corridor subdivision area map – condition B7 of Calderwood Concept Plan Approval) the proposed wording of a positive covenant that is to be placed on the title of Lot 1188, Pt Lot 2261 and Lot 1184 pursuant to section 88B of the Conveyancing Act 1919 as follows, is to be submitted to and approved by Council:

- a. Lot 1188 is to be consolidated with the adjoining Special Riparian Environmental Corridor land on Lot 3130 DP 1225477 (317 Calderwood Road, Calderwood) prior to the issue of a Subdivision Certificate for the subdivision of 317 Calderwood Road, Calderwood.
- b. Pt Lot 2261 to be consolidated with the adjoining Special Riparian Environmental Corridor land on Lot 10 DP 619547 (368 Calderwood Road, Calderwood) prior to the issue of a Subdivision Certificate for the subdivision of 368 Calderwood Road, Calderwood.
- c. Pt Lot 2261 to be consolidated with the adjoining Special Riparian Environmental Corridor land on Lot 1 DP 998349 (379 Calderwood Road, Calderwood) prior to the issue of a Subdivision Certificate for the subdivision of 379 Calderwood Road, Calderwood.
 - d. A restriction as to user to be imposed on lots 1188 and 2261 that no dwellings/ buildings are permitted on those lots.

The final plan of subdivision as registered must include the positive covenant created on the title of Lot 1188, Pt Lot 2261 and Lot 1184 as approved by Council pursuant to this condition.

F1A. Consolidation of Environmental Reserve Land

Lot 1184 is to be consolidated with the Environmental Reserve land on Lot 1 DP 1262260 (Bushranger Parade, Calderwood) prior to the issue of a Subdivision Certificate for this subject Development Application.

F2. Street Naming

Proposed names for all new roads and reserves shall be submitted to Council for consideration as early as possible but must be approved prior to release of the Subdivision Certificate and comply with Council's "Naming and Addressing Policy POL-0108-V01" and NSW Addressing User Manual (AUM).

The developer shall provide a list of preferred park names for any area of public reserve proposed to be dedicated to Council. This list shall be submitted in conjunction with the list of preferred street names for Councils consideration. Once approved, all areas shall be appropriately signposted by Council at the developer's expense. Application for road names can be made using Council's Road Naming Application form.

Addresses for this development will be allocated following approval of road names and prior to the issue of the Subdivision Certificate.

F2. Inspection of Stormwater Pipes

All stormwater pipes within road reserves and within drainage easements intended to be dedicated to Council must be inspected by CCTV. The CCTV must be carried out after all earthworks and road pavement works within the locality of the pipelines has been completed or as discussed with the Principal Certifier. A copy of the CCTV inspection must be recorded and submitted to the Principal Certifier prior to the release of the Subdivision Certificate. Damaged pipes must either be replaced or repaired to the Principal Certifier's satisfaction prior to the issuing of a Subdivision Certificate. Written certification of a 100 year design life must be provided for all stormwater pipe repairs.

F3. Final Geotechnical Report

A final geotechnical report prepared by a suitably qualified and experienced geotechnical consultant must be submitted to the Certifying Authority prior to the issue of the Subdivision Certificate. The report must include, but is not necessarily limited to:

- a. all earthwork operations;
- b. a fill plan showing extent and depth of fill;
- c. certification that all earthworks within the site have complied with the Subdivision Design Code. This must include appropriate test results, and test location diagram and date of testing;
- d. certification that all recommendations contained in geotechnical reports lodged in support of this development have been satisfied;
- e. the exact extent of any restricted building zones or any other restrictions affecting any of the allotments,
- f. identification of all land affected by landslip or instability constraints (if applicable) and
- g. verification that the pipe trench bedding and backfill complies with the requirements for HS3 bedding/backfill.

F4. Lot Creation Geotechnical Report

A Geotechnical Engineer's report must be submitted to the Principal Certifier with the Subdivision Certificate application. The report must be prepared by a Chartered Professional Engineer with professionally recognised geotechnical experience and must include:

- a. the classification of the proposed lot in accordance with the Australian Standard 2870-2011 Residential Slabs and Footings or subsequent amendments,
- b. the classification of the lot in relation to risk of slope instability, and
- c. the required site preparation and construction constraints within the building envelope of the lot appropriate to the assessed risk of slope instability.

F5. Road Dedication

Prior to issue of the Subdivision Certificate, Benkelman beam testing must be undertaken on all roads proposed for dedication as road reserve. Testing must be carried out in accordance with the current version of the Shellharbour City Councils *Subdivision Design Code* at the time of issue of this consent. The acceptance criteria will be based on the tolerable deflections as specified by *AUSTROADS* at the time of issue of this consent.

At the time immediately prior to all roads becoming a designated gazetted public road an inspection is to be undertaken by Council to determine that the road is in satisfactory condition. The road is to be handed over to Council at no cost to Council prior to issue of the Subdivision Certificate.

F6. Flooding Subdivision - Certification

In order to certify that all newly created residential lots are located above the Probable Maximum Flood (PMF) level and flood impacts outside the development are within acceptable limits, a report prepared by a suitably qualified Floodplain Management Engineer is required prior to the release of the Subdivision Certificate. This report must provide details of flood modelling using all Works As Executed information from completed works along with Hydrology Data (flow rates) for the 20% Annual Exceedance Probability (AEP), 1% AEP and PMF events input from Council's Adopted Macquarie Rivulet Flood Study. The report must be submitted to the satisfaction of the Principal Certifier.

F7. Subdivision Construction Works Maintenance Bond

The developer must lodge a Subdivision Construction Works Maintenance Bond in accordance with Council's Fees and Charges prior to the release of the Subdivision Certificate.

F8. Final Plan of Subdivision

Prior to the release of the final plan of subdivision, it will be necessary to obtain a subdivision certificate. In this regard, it will be necessary to submit:

- a. an application for a Subdivision Certificate,
- b. a Practical Completion Certificate,
- c. two paper prints of the final plan of subdivision,
- d. the original and two paper copies of the 88B Instrument and Administration Sheet
- e. fees appropriate at the time of submission of the application.
- f. an electronic copy of the subdivision linework. The electronic copy should be in Map Grid of Australia 1994 Zone 56 (GDA94) coordinates and must contain closed linework of

boundaries and easements. It must be submitted in DWG or DXF format on cd-rom or by email to *traffic&subdivision@shellharbour.nsw.gov.au*. The email and the electronic copy should be named "Subdivision Title & Stage DA No./Year Street Address Final Plan".

All sections of the plan, 88b Instrument and Administration Sheet including the original and copies, (except for the General Manager's date and signature) must be completed prior to lodging the plan.

F9. Utilities - Electricity, Gas & Telephone

- a. Electricity must be provided to all proposed lots. The developer must submit written advice to the Principal Certifier from relevant electricity provider that all requirements for the supply of electricity to the proposed allotments have been satisfied. This advice must be submitted with the Subdivision Certificate application.
- b. Telephone services must be provided to all proposed lots. In this regard, the developer must submit written advice to the Principal Certifier from a Telstra Australia accredited contractor that all requirements for the supply of telephone services to the proposed allotments have been satisfied. This advice must be submitted with the Subdivision Certificate application.
- c. The developer must submit written advice to the Principal Certifier from a natural gas accredited contractor that all requirements for the supply of gas services to the proposed allotments have been satisfied. This advice must be submitted with the Subdivision Certificate application.

F10. Works As Executed Plans - Subdivision

Works As Executed plans must be submitted to the Principal Certifier by a Registered Surveyor with the Subdivision Certificate application. The Works As Executed dimensions and levels must be shown in red on a copy of the approved Subdivision Works Certificate plans. As a minimum the plan must show:

- a. compliance with the approved design plans of all drainage works within council land, road reserve and drainage easements including connection into the subject lot/s, surface and invert levels of all pits, invert levels and sizes of all pipelines,
- b. certification from a registered surveyor that all storm water pipes and other services are wholly within an appropriate easement,
- c. compliance with the approved design plans of paved areas within rights of carriageway and road reserve,
- d. the extent, depth and final levels of filling,
- e. the location of all underground service conduits and
- f. all deviations from the approved Civil Engineering Plans.

All levels must relate to Australian Height Datum.

These plans must be accompanied by a compliant ADAC XML digital file. All details to be in accordance with the ADAC Data Capture Guidelines specification, which is available on Shellharbour City Council's website.

F11. Services & 88B Instrument

Lots affected by new or existing utility services must be burdened with easements and restrictions on the use of land to the satisfaction of the Principal Certifier and the relevant utility provider.

Restrictions must be placed on title with respect to:

- a. access and maintenance for structures (such as retaining walls) on the boundary or immediately adjacent to boundaries,
- b. the provision of legal and practical access for future allotments (e.g. reciprocal rights of carriageway, maintenance),
- c. drainage structures,
- d. fencing requirements,
- e. building and design guidelines (BDG's) required by Condition B5, on allotments within the bush edge buffer overlay under the Calderwood Development Control Strategy,
- e. the Vegetation Management Plans for the riparian corridors and the Environmentally Sensitive Land (ESL) which must be implemented in perpetuity,
- f. the provision of legal and practical access from the riparian corridor to the Local Park in accordance with the Concept Plan Approval (Proposed Pedestrian and Cycle Network),
- g. Asset Protection Zones and/or Building Envelopes are to be listed on the relevant property titles referred to in the Plan of Subdivision of Lot 101 in DP 1246183 for Lots 1174 to 1183, Lots 1143, 1102 to 1105 inclusive and Lots 2139 to 2151 inclusive.

F12. Vegetation Management Plan

A site inspection by Council must be arranged by the proponent with Council's Engineer, Environment Officer, the applicant and the contractor and must be held not less than 14 days prior to the practical completion of the VMP on site and issue of the Subdivision Certificate. The purpose of this inspection is to identify any outstanding issues that will require rectification and confirmation that the VMP implementation has been achieved prior to issuing the Subdivision Certificate. A verification report indicating that the Vegetation Management Plan/s have been complied with must also be submitted with the Compliance Certificate application.

Following the implementation of Vegetation Management Plan, the maintenance component must continue for a period of 3 years following issuing of the Subdivision Certificate. Progress reports must be submitted to Council every 12 months during this time.

A fee (as per Council's Fees and Charges) will apply per inspection and re-inspections.

F13. Verification of Waste Management

Written documentation, such as receipts, verifying that all waste streams were managed in accordance with the Waste Management Plan must be provided to the Principal Certifying Authority prior to the issue of a Subdivision Certificate.

F14. Planning Agreement Wollongong City Council

Prior to the issue of the relevant subdivision certificate, the Proponent must comply with all necessary requirements of the Planning Agreement between Carel and Muriel Leussink and Wollongong City Council dated 3 November 2020.

F15 Planning Agreement – Shellharbour City Council

Prior to the issue of the relevant subdivision certificate, the Proponent must comply with all necessary requirements of the Planning Agreement entered into between Shellharbour City Council and the Proponent as required by Condition B30.

F16. Planning Agreement – Minister for Planning and Public Spaces

Prior to the issue of the relevant subdivision certificate, the Proponent must comply with all necessary requirements of the Planning Agreement between Calderwood Heights Pty Ltd and the Minister for Planning and Public Spaces dated 16 September 2020.

F17. Calderwood Open Space – Local Park 7 and District Park 2

In accordance with the provisions of the VPA required under Condition B30, proposed Lot 2259 and Lot 1185 must be dedicated to Council for the purpose of public open space.

A development application detailing the proposed embellishments and satisfying the requirements of the VPA and the approved Landscape Masterplan must be lodged with Council at least 12 months in advance of the timeframe for delivery of the parks as defined within the VPA.

The plans submitted with that development application must be prepared by a landscape architect generally in accordance with the Streetscape Masterplan prepared by Taylor Brammer Landscape Architects Pty Ltd dated 6 May 2021, and in accordance with the following documents:

- Council's Open Space, Recreation and Community Facilities Needs Study Report 2010;
- VPA
- Calderwood Valley Landscape Masterplan, November 2019 where relevant;
- Everyone Can Play NSW State Guidelines 2019.

F18. Dedication to Council

All intended reserves, roads, pathways and drainage easements must be dedicated to Council at no cost.

F19. Landscape Inspection

All landscape works including street trees must be inspected by Council prior to the issue of the Landscape Practical Completion Certificate. It is the responsibility of the developer to notify Council for the street tree/landscape inspection.

F20. Landscape Maintenance Period

To ensure establishment of the landscape, the completed landscaping works must be maintained for a 36-month period following the issue of the Subdivision Certificate. It is the responsibility of the developer to ensure that any defective landscaping and/or plantings shall be rectified/replaced at the conclusion of the maintenance period in accordance with the approved landscape plan.

F21. Section 73 Certificate

A Section 73 Compliance Certificate under the *Sydney Water Act 1994* must be obtained from Sydney Water. This Section 73 Certificate must be submitted to the Principal Certifier prior to the issue of a subdivision certificate.

It is recommended that applicants apply early for the certificate, as there may be water and sewer pipes to be built and this can take some time. This can also impact on other services and building, driveway or landscape design.

Application must be made through an authorised Water Servicing Coordinator. For help either visit www.sydneywater.com.au > Plumbing, building and developing > Developing > Land development or telephone 13 2092.

PART G - AFTER ISSUE OF SUBDIVISION CERTIFICATE

G1. Subdivision Maintenance Period

All subdivision civil works (council assets), must be maintained for a minimum period of 12 months commencing from the date of the issue of the Subdivision Certificate, unless otherwise agreed to in writing by Council. The developer must ensure that any defective works shall be rectified and/or replaced during the maintenance period in accordance with the approved Subdivision Works Certificate plans. All costs arising during the maintenance period must be borne by the developer. All subdivision civil works (council assets) must be maintained in its original construction condition for this liability period. The developer must notify Council for a re-inspection at the end of the maintenance period.

G2 Maintenance Period of Wetlands/ Basins

A site inspection must occur with an Environment Officer present at the issue of Subdivision Certificate to ensure works have been completed prior to moving into a maintenance phase.

At the issue of Subdivision Certificate the proponent is responsible for all maintenance of the wetlands and vegetated storm water assets during the 3 year maintenance period and upon Councils acceptance that the wetlands and vegetated storm water assets are of a satisfactory condition at the end of the 3 year maintenance period. Approaching hand over at the conclusion of the 3 year maintenance period, a site meeting with Council must be arranged by the proponent. The objective of the meeting will be to identify any outstanding actions that require rectification by the proponent before asset hand over. Annual reports documenting implementation measures and containing all monitoring results are to be submitted to Council during this phase.

G3 Vegetation Management Plan

After the issue of the Subdivision Certificate, the maintenance period consistent with the Vegetation Management Plan must commence and continue for a period of 3 years following issue of the Subdivision Certificate. Progress reports must be submitted to Council every 12 months during this time.

Approaching the conclusion of the 3 year maintenance period, a site meeting with Council must be arranged by the proponent. The objective of the meeting will be to identify any outstanding actions that require rectification by the proponent. Annual reports documenting implementation measures and containing all monitoring results are to be submitted to Council during this phase.

A fee (as per Council's 2020/2021 Fees and Charges) will apply per inspection and re-inspections.

G4 Street Tree Maintenance Period

To ensure establishment of the street tree installation works, the completed works must be maintained for a 12 month period following street tree planting. Street tree planting will commence when 70% of sites have been developed with residences. It is the responsibility of the developer to ensure that any defective landscape works shall be rectified/replaced at the conclusion of the maintenance period in accordance with the approved landscape plan.

G7 Street Tree Handover Inspection

All street tree works on land to be dedicated to Council requires a handover inspection to be carried out at the end of the maintenance period. In this regard the developer is to notify Council one month prior to handover to arrange an inspection with Council and the developer. Council will take full maintenance responsibility of all landscape works following a satisfactory result at the end of the maintenance period.

G8 Landscape Handover Inspection

All landscape works on land to be dedicated to Council requires a handover inspection to be carried out at the end of the maintenance period. In this regard the developer is to notify Council one month prior to handover to arrange an inspection with Council and the developer. Council will take full maintenance responsibility of all landscape works following a satisfactory result at the end of the maintenance period.

G9. Fencing

i. Corner Lot Fencing

Corner Lot Fencing All corner lot front boundary fencing must be of brick piers 350x350mm with a minimum height of 1.5m up to 1.8m maximum height, measured from foot path level, and spaced approximately 2.5m-3m apart:

- a. The brick piers shall be constructed of brickwork and finished to match the style of the dwelling on the lot; and
- b. The infill between the brick piers is to match the style of the dwelling and must be lightweight and open (minimum 20% transparent) in style such as metal, timber battens, hedging or open style metal panelling.

Metal sheet fencing panels are not be used on any corner lot front property boundary fencing, and may only be used as side boundary fencing to adjoining residential allotments where it does not extend forward of the dwelling house building line on either side of the boundary.

ii. Metal Sheet Fencing

Metal sheet fencing panels are not to be used on any lot property boundary forward of the dwelling house building line.

The requirements of this condition must be placed in an 88B Instrument, as restriction as to user and must be registered on the title of all residential allotments as relevant, in accordance with section 88E of the Conveyancing Act 1919. The 88B Instrument must contain a provision that that the authority permitted to modify, alter or extinguish the restriction is the Shellharbour City Council.

PART H – AGENCY APPROVALS

H1. Agency Approvals

The requirements of the Agency Approvals attached to this consent must be complied with at all times.

See over page

1. New South Wales Rural Fire Service (NSW RFS)

All communications to be addressed to:

Headquarters 15 Carter Street Lidcombe NSW 2141

Telephone: 1300 NSW RFS e-mail: records@rfs.nsw.gov.au

The General Manager Shellharbour City Council Locked Bag 155 SHELLHARBOUR CITY CENTRE NSW 2529

Your Ref: 0290/2018 Our Ref: D18/6304 DA18071613964 DD

ATTENTION: Jon Shillito

13 August 2018

Dear Sir / Madam

Integrated Development Application - 347 Calderwood Road Calderwood 2527

Headquarters

Locked Bag 17

Granville NSW 2142

Facsimile: 8741 5433

I refer to your correspondence dated 6 July 2018 seeking general terms of approval for the above Integrated Development Application.

The New South Wales Rural Fire Service (NSW RFS) has considered the information submitted. General Terms of Approval, under Division 4.8 of the 'Environmental Planning and Assessment Act 1979', and a Bush Fire Safety Authority, under Section 100B of the 'Rural Fires Act 1997', are now issued subject to the following conditions:

Asset Protection Zones

The intent of measures is to provide sufficient space and maintain reduced fuel loads so as to ensure radiant heat levels of buildings are below critical limits and to prevent direct flame contact with a building. To achieve this, the following conditions shall apply:

 An asset protection zone (APZ) is to be provided within proposed Lot(s) 1102 to 1105 and 1175 to 1183 of the development. In accordance with section 88B of the 'Conveyancing Act 1919' a restriction to the land use shall be placed on these lots requiring that no residential structures will be located within the APZ which shall be maintained as outlined within 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'. Details of these APZs are shown on Figure 4 "Bushfire Hazard Analysis & Asset Protection Zone" of the Peterson Bushfire Assessment dated 23 May 2018 reference 18014.

Water and Utilities

The intent of measures is 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

ID:113964/107758/5

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electricity so as not to contribute to the risk of fire to a building. To achieve this, the following conditions shall apply:

 Water, electricity and gas are to comply with section 4.1.3 of 'Planning for Bush Fire Protection 2006'.

Access

The intent of measures for public roads is to provide safe operational access to structures and water supply for emergency services, while residents are seeking to evacuate from an area. To achieve this, the following conditions shall apply:

 Public road access shall comply with section 4.1.3 (1) of 'Planning for Bush Fire Protection 2006'.

General Advice - consent authority to note

This approval is for the subdivision of the land only. Any further development application for class 1,2 & 3 buildings as identified by the 'Building Code of Australia' must be subject to separate application under section 79BA of the EP & A Act and address the requirements of 'Planning for Bush Fire Protection 2006'.

Should you wish to discuss this matter please contact Deborah Dawson on 1300 NSW RFS.

Yours sincerely

Bradley Bourke A Team Leader Development Assessment and Planning

For general information on bush fire protection please visit www.rfs.nsw.gov.au

2. Natural Resources Access Regulator (NRAR)



Natural Resources Access Regulator Locked Bag 5123, Paramatta NSW 2124 T 1800 633 362 www.industry.nsw.gov.au/nrar

Contact: Jeremy Morice Phone: 02 4224 9736 Email: Jeremy.Morice@dpi.nsw.gov.au

General Manager Shellharbour City Council Locked Bag 155 Shellharbour City Centre NSW 2529

3 September 2018

Our ref: IDAS1108503

Your Ref: DA0290/2018

Dear Lauran

Attention: Jon Shillito

Re: Integrated Development Referral – General Terms of Approvals Development Reference: DA0290/2018 Description: Three Stage Residential Subdivision Of Land and Associated Works To Create 455 Residential Lots, Two Residual Riparian Corridor Lots, Two Park Lots And Works To Calderwood Road Fronting The Site Location: Lot 1 DP 608238, 347 Calderwood Road, Calderwood

I refer to your recent letter regarding an integrated Development Application (DA) I refer to your recent letter regarding an integrated Development Application (DA) proposed for the above location. Attached, please find Natural Resources Access Regulator's (NRAR) General Terms of Approval (GTA) for part of the proposed development requiring a Controlled Activity approval under the *Water Management Act 2000* (WM Act), as detailed in the subject DA.

Please note Council's statutory obligations under section 91A (3) of the *Environmental Planning and Assessment Act 1979* (EPA Act) which requires a consent, granted by a consent authority, to be consistent with the general terms of any approval proposed to be granted by the approval body.

If the proposed development is approved by Council, NRAR request these GTA's be included (in their entirety) in Council's development consent. Please also note NRAR requests notification:

 If any plans of documents are amended and these amendments significantly change the proposed development or result in additional works or activities (i) in the bed of any river, or lake or estuary; (ii) on the banks of any river, lake or estuary; (iii) on land within 40 metres of the highest bank of a river, lake or estuary; or (iv) any excavation which interferes with an aquifer.

NRAR will ascertain from the notification if the amended plans require review of or variation/s to the GTA. This requirement applies even if the amendment is part of Council's proposed consent conditions and do not appear in the original documentation.

- If Council receives an application under s96 of the EPA Act to modify the development consent and the modifications change the proposed work or activities described in the original DA.
- Of any legal challenge to the consent.

2

As the proposed work or activity cannot commence before the applicant applies for and obtains an approval, NRAR recommends the following condition be included in the development consent:

The attached GTA issued by NRAR do not constitute an approval under the *Water Management Act 2000.* The development consent holder must apply to NRAR for a Controlled Activity approval **after consent** has been issued by Council **and before** the commencement of any work or activity.

A completed application form must be submitted to NRAR together with any required plans, documents, application fee, security or bank guarantee (if required) and proof of Council's development consent. Finalisation of an approval can take up to eight (8) weeks from the date the application and all required supporting documentation is received.

Application forms are available from the NRAR website at:

www.industry.nsw.gov.au >> Water >> Licensing & Trade >> Approvals.

NRAR requests that Council provide a copy of this letter to the development consent holder.

NRAR also requests a copy of the determination for this development application be provided by Council as required under section 91A (6) of the EPA Act.

Yours sincerely

pp: LeDedall

Patrick Pahlow Acting Manager Regional Water Regulation (East) Water Regulatory Operations Natural Resources Access Regulator





General Terms of Approval

for proposed development requiring approval under s89, 90 or 91 of the Water Management Act 2000

Reference Number:	IDAS1108503
Issue date of GTA:	03 September 2018
Type of Approval:	Controlled Activity
Description:	Three stage residential subdivision of land and associated works to create 455 residential lots, two residual riparian corridor lots, two park lots and works to Calderwood Road fronting the site
Location of work/activity:	347 Calderwood Road CALDERWOOD
DA Number:	DA290/2018
LGA:	Shellharbour City Council
Water Sharing Plan Area:	Greater Metropolitan Region Unregulated River Water Sources

The GTA issued by NRAR do not constitute an approval under the *Water Management Act 2000*. The development consent holder must apply to NRAR for the relevant approval after development consent has been issued by Council and before the commencement of any work or activity.

Condition Number	Details
	Design of works and structures
GT0009-00010	Before commencing any proposed controlled activity on waterfront land, an application must be submitted to Natural Resources Access Regulator, and obtained, for a controlled activity approval under the Water Management Act 2000.
GT0013-00001	A. Any proposed controlled activity carried out under a controlled activity approval must be directly supervised by a suitably qualified person. B. A copy of this approval must be: i. kept at the site where the controlled activity is taking place, and ii. provided to all personnel working on the controlled activity.
GT0019-00003	Any proposed excavation on waterfront land must be undertaken in accordance with a plan submitted as part of a controlled activity approval, to be approved by Natural Resources Access Regulator.
	Frosion and sediment controls
GT0014-00007	A. The consent holder must ensure that any proposed materials or cleared vegetation, which may: i. obstruct water flow, or ii. wash into the water body, or iii. cause damage to river banks, are not stored on waterfront land, unless in accordance with a plan held by Natural Resources Access Regulator as part of a controlled activity approval. B. When the carrying out of the controlled activity has been completed, surplus materials must be removed from waterfront land.
GT0021-00004	The proposed erosion and sediment control works must be inspected and maintained throughout the construction or operation period of the controlled activity and must not be removed until the site is fully stabilised.
	Plans standards and quidelines
GT0002-00410	A. This General Terms of Approval (GTA) only applies to the proposed controlled activity described in the plans and associated documents found in Schedule 1, relating to Development Application 290.2018 provided by Council to Natural Resources Access Regulator. B. Any amendments or modifications to the proposed controlled activity may render the GTA invalid. If the proposed controlled activity is amended or modified, Natural Resources Access Regulator, Parramatta Office, must be notified in writing to determine if any variations to the GTA will be required.

Level 11, 10 Valentine Avenue, Parramatta, NSW 2124 | LOCKED BAG 5123, Parramatta, NSW 2124 water.enquiries@dpi.nsw.gov.au | www.water.nsw.gov.au

Template Ref: WLS 004A, Version 1.0 - May 2016





General Terms of Approval

for proposed development requiring approval under s89, 90 or 91 of the Water Management Act 2000

Reference Number:	IDAS1108503
Issue date of GTA:	03 September 2018
Type of Approval:	Controlled Activity
Description:	Three stage residential subdivision of land and associated works to create 455 residential lots, two residual riparian corridor lots, two park lots and works to Calderwood Road fronting the site
Location of work/activity:	347 Calderwood Road CALDERWOOD
DA Number:	DA290/2018
LGA:	Shellharbour City Council
Water Sharing Plan Area:	Greater Metropolitan Region Unregulated River Water Sources
GT0004-00003	A. A security deposit must be provided, if required by Natural Resources Access Regulator. B. The deposit must be: i. a bank guarantee, cash deposit or equivalent, and ii. equal to the amount required by Natural Resources Access Regulator for that controlled activity approval.
GT0005-00220	A. The application for a controlled activity approval must include the following plan(s): - i. Detailed civil construction plans with outlet designs; ii. Vegetation management plan with a fully structured vegetation riparian corridor outlining details of vegetation species and densities; iii. Bushfire assessment identifying the asset protection zone outside of the fully structured vegetation riparian zone; iv. Erosion and sediment control plan; v. Project costings. B. The plan(s) must be prepared in accordance with Natural Resources Access Regulator's guidelines located on the website https://www.industry.nsw.gov.au/water/licensing-trade/approvals/controlled-activities.
GT0010-00006	All documents submitted to Natural Resources Access Regulator as part of an application for a controlled activity approval must be prepared by a suitably qualified person.
GT0012-00004	Any proposed controlled activity must be carried out in accordance with plans submitted as part of a controlled activity approval application, and approved by Natural Resources Access Regulator.
GT0030-00006	The application for a controlled activity approval must include plans prepared in accordance with Natural Resources Access Regulator's guidelines located on the website https://www.industry.nsw.gov.au/water/licensing-trade/approvals/controlled-activities.
	Rehabilitation and maintenance
GT0011-00001	A rehabilitation plan for the waterfront land must be provided as part of a controlled activity approval application.
GT0023-00001	Vegetation clearance associated with the proposed controlled activity must be limited to where the controlled activity is to be carried out, as shown on the approved plan(s).
	Reporting requirements
GT0016-00003	The consent holder must inform Natural Resources Access Regulator in writing when any proposed controlled activity carried out under a controlled activity approval has been completed.
GT0020-00004	The consent holder must inform Natural Resources Access Regulator in writing when the proposed construction of the controlled activity has been completed.

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SCHEDULE 1

The plans and associated documentation listed in this schedule are referred to in general terms of approval (GTA) issued by NRAR for integrated development associated with DA290/2018 as provided by Council:

Statement of Environmental Effects (June 2018)

Template Ref: WLS 004A, Version 1.0 - May 2016

Page 3

3. Sydney Water



11 January 2019

Our Ref: Case 176336

Ms Jasmina Micevski Manager - Planning Shellharbour City Council Locked Bag 155, Shellharbour City Centre NSW 2529

RE: Integrated Development Application No.0290/2018 at Calderwood Heights, 347 Calderwood Road, CALDERWOOD – Sydney Water comments

Dear Ms Micevski,

Thank you for notifying Sydney Water of the proposed residential development at Calderwood URA (Lot 1 DP 608238) and associated works. We have reviewed the application for this 455 - lot subdivision and provide the following servicing information to assist in your assessment of the proposal, based on the information provided:

Sydney Water has a Concept Plan approval for the servicing of the area, and in 2018, it has carried out detailed planning – options assessments to determine required trunk works for future servicing of the area. We intend to provide required trunk infrastructure, subject to funding approval and demonstrated demand for our services, by the end of 2021, as part of our Package 3 Calderwood growth infrastructure works. Developer will be required to deliver local lead in pipes and site reticulation works at development stage, through engaging a Water Servicing Coordinator. In response to the application of a s73 Compliance Certificate from the proponent, usually a condition of subdivision development consent, Sydney Water will provide its firm servicing requirements. Specific servicing advice at this stage include the following:

Water

- Our recent servicing investigation shows that the trunk drinking water system has adequate capacity to service the proposed development.
- Amplifications or extensions to the drinking network may be required complying with the Water Services Association of Australia (WSAA) code - Sydney Water edition.
- Amplifications or extensions to the drinking water network are planned to be constructed by late 2021, as Package 3 Calderwood trunk works.

Wastewater

- Our servicing investigation shows that the trunk wastewater system has adequate capacity to service the proposed development.
- Amplifications or extensions to existing wastewater network may be required complying with the Water Services Association of Australia (WSAA) code - Sydney Water edition. Sydney Water intends to deliver any required wastewater trunk works by the end of 2021.

Sydney Water Corporation ABN 49 776 225 038

¹ Smith St Parramatta 2150 | PO Box 399 Parramatta 2124 | DX 14 Sydney | T 13 20 92 | www.sydneywater.com.au Delivering essential and sustainable water services for the benefit of the community



Further advice and requirements for this proposal are in the attachment. If you require any further information, please contact Enrique Sarthou of the Growth Planning and Development Team on 02 8849 6496 or email <u>enrique.sarthou@sydneywater.com.au</u>.

Yours sincerely

Fernando Ortega A/Manager, Growth Planning & Development

Sydney Water Corporation ABN 49 776 225 038

1 Smith St Parramatta 2150 | PO Box 399 Parramatta 2124 | DX 14 Sydney | T 13 20 92 | www.sydneywater.com.au Delivering essential and sustainable water services for the benefit of the community



Attachment 1

Sydney Water Servicing

A Section 73 Compliance Certificate under the Sydney Water Act 1994 must be obtained from Sydney Water.

The proponent is advised to make an early application for the certificate, as there may be water and wastewater pipes to be built that can take some time. This can also impact on other services and buildings, driveways or landscape designs.

Applications must be made through an authorised Water Servicing Coordinator. For help either visit <u>www.sydneywater.com.au</u> > Plumbing, building and developing > Developing > Land development or telephone 13 20 92.

Building Plan Approval

The approved plans must be submitted to the Sydney Water <u>Tap in[™]</u> online service to determine whether the development will affect any Sydney Water sewer or water main, stormwater drains and/or easement, and if further requirements need to be met.

The Sydney Water <u>Tap in</u>[™] online self-service replaces our Quick Check Agents as of 30 November 2015.

The Tap in[™] service provides 24/7 access to a range of services, including:

- building plan approvals
- connection and disconnection approvals
- diagrams
- trade waste approvals
- pressure information
- water meter installations
- pressure boosting and pump approvals
- changes to an existing service or asset, e.g. relocating or moving an asset.

Sydney Water's Tap in[™] online service is available at:

https://www.sydneywater.com.au/SW/plumbing-building-developing/building/sydney-water-tapin/index.htm

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4. Heritage New South Wales (Formerly Office of Environment and Heritage (OEH))

In light of the additional information provided, DPIE Biodiversity & Conservation Division provides the following General Terms of Approval (GTAs):

- As Aboriginal objects will be harmed as a result of this development, an Aboriginal Heritage Impact Permit (AHIP) must be sought and granted for these objects prior to the commencement of works.
- The AHIP application must be accompanied by appropriate documentation and mapping as outlined in *Applying for an Aboriginal Heritage Impact Permit, Guide for Applicants (OEH 2011)* and with reference to the requirements of the *Guide to Investigating, assessing and reporting on Aboriginal cultural heritage in NSW (OEH 2011)*.
- Consultation with the Aboriginal community undertaken as part of an AHIP application must documented in the AHIP application and must comply with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010.*
- The application must consider the management and appropriate mitigation measures for all Aboriginal objects within the application area.
- The appropriate long term management of excavated Aboriginal objects must be resolved before submitting the AHIP application. KNC (2019, p.27) proposes lodging the excavated Aboriginal objects with the Australian Museum. Evidence of consultation with the museum this matter must be included with the AHIP application.
- The AHIP application must include complete records of the archaeological test excavation program in accordance with the reporting requirements of the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW 2010).
- The results of the test excavations must be documented in Aboriginal site impact recording forms submitted to the AHIMS Registrar before submitting the AHIP application.

5. Endeavour Energy

Subject to the following recommendations and comments, Endeavour Energy has no objection to the Development Application.

• Network Capacity / Connection

Endeavour Energy has noted the following in the Statement of Environmental Effects:

1.3 Other Pre-lodgement Consultation

In the preparation of this SEE and the consultant reports, pre-lodgement consultation was also carried out with the following authorities / agencies:

Authority / Agency	Commentary
Services/Utilities providers:	
Electricity	A formal technical review request for connection of the proposed development was made with Endeavour Energy in March 2018.
	Endeavour Energy advised that the site is located approximately 4.0km from Endeavour Energy's existing Albion Park Zone Substation (ZS), and approximately 1.8km from the future Calderwood ZS being planned, and which will ultimately supply the subdivision.
	At present two 11kV OH feeders exist in the vicinity of the proposed development, APC2/A "Albion Park West" and APE2 "Yallah", but with limited capacity.
	Existing 2017/18 Distribution Works Program and proposed 2018/19 DWP are anticipated to deliver a new 11kV feeder APF2 "Tullimbar" from Albion Park ZS, which is expected to provide additional, interim capacity to the committed greenfield residential loads in the Calderwood precinct from Albion Park ZS. That interim capacity being provided to the proposed residential development above, is anticipated to be transferred to the new Calderwood ZS during FY 2021/22.
	At the time of this technical review (February 2018) it is predicted that capacity will be available for an initial 150 lots, from either 11kV feeder APC2/A or proposed APF2 depending on the actual commencement and completion dates of the initial subdivision.
	Ultimately, a new 11kV UG feeder will be required from Calderwood ZS to supply the load of the entire proposed 455 lot subdivision. A new padmounted substation will also be required within the subdivision.

Endeavour Energy's Asset Strategy & Planning Branch whilst not having undertaken a detailed analysis of the Development Application have indicated that:

No additional comments to those made by the applicant in the Statement of Environmental Effects and the following advice contained in Endeavour Energy's submission to Council on 6 April 2018 regarding Development Application DA0536/2016 at 221 North Macquarie Road TONGARRA NSW 2527 is required from Asset Strategy & Planning Branch at this stage'.

Asset Strategy & Planning where requested by Network Connections to review a firm customer application (CAP) 'URS19910' in August 2017 for this greenfield residential subdivision in the Calderwood precinct.

To temporarily cater for the load associate with this and other greenfield developments beyond the original 550 lots quoted, additional temporary capacity is being made available from Albion Park Zone Substation. The additional temporary capacity will be delivered through the establishment of a new 11kV distribution feeder, due for completion in 2018/19. Also Endeavour Energy has an approved renewal project TS618 PD T-1763 to replace No. 2 & No.3 Transformers at Albion Park Zone Substation, which will also improve the firm capacity available to the distribution network.

Ultimately, Calderwood Zone Substation when constructed and commissioned will be the permanent supply for this residential subdivision.

The contract negotiations with Lend Lease for the acquisition of the Calderwood Zone Substation are quite advanced but not yet finalised. At this stage, timing in regards to Albion Park Zone Substation reaching it maximum design capacity should not be an issue.

In due course the applicant for the future proposed development will need to submit an application for connection of load via Endeavour Energy's Network Connections Branch to carry out the final load assessment and the method of supply will be determined. Depending on the outcome of the assessment, any required padmount substation/s will need to be located within the property (in a suitable and accessible location) and be protected (including any associated cabling) by an easement and associated restrictions benefiting and gifted to Endeavour Energy. Please refer to Endeavour Energy's Mains Design Instruction MDI 0044 'Easements and Property Tenure Rights'. Further details are available by contacting Endeavour Energy's Network Connections Branch via Head Office enquiries on telephone: 133 718 or (02) 9853 6666 from 8am - 5:30pm or on Endeavour Energy's via the following link:

http://www.endeavourenergy.com.au/

Urban Residential Subdivision

Urban residential subdivision of a site is subject to Endeavour Energy Underground Residential Distribution (URD) policy. Endeavour Energy's Company Policy 9.2.5 'Network Asset Design', includes the following requirements for electricity connections to new residential subdivisions:

5.11.1.1 Urban areas

Reticulation of new residential subdivisions will be underground. In non-bushfire prone areas, new lines within existing overhead areas can be overhead, unless underground lines are cost justified or required by local council requirements.

Where underground reticulation is required on a feeder that supplies a mixture of industrial, commercial and/or residential loads, the standard of underground construction will apply to all types of load within that development.

Where ducting is used, adequate spare ducts and easements must be provided at the outset to cover the final load requirements of the entire development plan.

Extensions to the existing overhead 11kV/22kV network must generally be underground. Bare wire will be used for conductor replacements and augmentations except in treed areas where CCT or NMSHVABC must be used.

Extensions to the existing overhead LV network and augmentations must either be underground or ABC. Conductor replacements greater than 100m in route length must utilise aerial bundled cable.

CCT = Covered conductor thick with insulation fully rated for the voltage on the conductor. NMSHVABC = Non-metallic Screened High Voltage Aerial Bundled Cable.

Table 2 – Distribution Network Design Parameters Summary

Limits	Urban	Industrial and commercial	Non-urban	
Default H∨ reticulation	U/G	U/G	O/H	Î
Default LV reticulation	U/G	U/G	O/H – ABC	

Non-urban

Any area that is identified as rural land zoning

• Bushfire

Endeavour Energy has noted that the Statement of Environmental Effects indicates that 'The subject land is identified as 'bushfire prone land' on the Shellharbour Bushfire Prone Land

Map'. With the accompanying Bushfire Assessment Report assessing the impacts of the proposal against the NSW Rural Fire Service (RFS) publication Planning for Bushfire Protection 2006 providing the following advice (please also refer to the previous point 'Urban Residential Subdivision'):

3.5 Water supply and utilities

Electricity supply

In accordance with PBP, electricity should be underground wherever practicable. Where overhead electrical transmission lines are installed, the vegetation clearance distances are to comply with *ISSC 3 Guideline for Managing Vegetation Near Power Lines* (Industry Safety Steering Committee 2005). The guidelines specify a clearance distance of 0.5 m for a typical connection for residential dwellings.

The following is an extract of Endeavour Energy's Company Policy 9.1.1 Bushfire Risk Management:

9.1.1 BUSHFIRE RISK MANAGEMENT

1.0 POLICY STATEMENT

The company is committed to the application of prudent asset management strategies to reduce the risk of bushfires caused by network assets and aerial consumer mains to as low as reasonably practicable (ALARP) level. The company is also committed to mitigating, the associated risk to network assets and customer supply reliability during times of bushfire whilst achieving practical safety, reliability, quality of supply, efficient investment and environmental outcomes. The company is committed to compliance with relevant acts, regulations and codes.

Accordingly the network required to service the proposed development must be fit for purpose and meet the technical specifications, design, construction and commissioning standards based on Endeavour Energy's risk assessment associated with the implementation and use of the network connection / infrastructure for a bushfire prone site. In assessing bushfire risk, Endeavour Energy has traditionally focused on the likelihood of its network starting a bushfire, which is a function of the condition of the network. Risk control has focused on reducing the likelihood of fire ignition by implementing good design and maintenance practices. However safety risks associated with the loss of electricity supply are also considered.

• Location of Electricity Easements / Prudent Avoidance

The incorporation of electricity easements into privately owned lots is generally problematic for both Endeavour Energy and the future landowners and requires additional easement management to ensure no uncontrolled activities / encroachments occur within the easement area. Accordingly Endeavour Energy's recommendation is that whenever reasonably possible, easements be entirely incorporated into public reserves and not burden private lots (except where they are remnant lots or not subject to development). Endeavour Energy's preference is to have continuity of its easements over the most direct and practicable route affecting the least number of lots as possible. Therefore it generally does not support the incorporation of easements into to multiple / privately owned lots.

This is also in keeping with a policy of prudent avoidance by the siting of more sensitive uses away from any electricity infrastructure to minimise exposure to electric and magnetic fields (EMF), noise etc. associated with the 24/7/365 (all day, every day of the year) operation of the electricity network. Please find attached a copy of ENA's 'Electric & Magnetic Fields – What We Know, January 2014' which can also be accessed via the ENA's website at http://www.ena.asn.au/ and provides the following advice:

Localised EMFs may also be encountered in specific situations such as near substations, underground cables, specialised electrical equipment, or at elevated locations near lines. Note that the strengths of EMFs decrease rapidly with distance from the source.

Typical magnetic field measurements associated with Endeavour Energy's activities and assets given the required easement widths, safety clearances etc. and having a maximum voltage of 132,000 volt / 132 kV, will with the observance of these separation distances not exceed the recommended magnetic field public exposure limits.

• Vegetation Management

The planting of large trees in the vicinity of electricity infrastructure is not supported by Endeavour Energy. Suitable planting needs to be undertaken in proximity of electricity infrastructure. Larger trees should be planted well away from electricity infrastructure and even with underground cables, be installed with a root barrier around the root ball of the plant. Landscaping that interferes with electricity infrastructure may become subject to Endeavour Energy's Vegetation Management program and/or the provisions of the *Electricity Supply Act 1995* (NSW) Section 48 'Interference with electricity works by trees' by which under certain circumstances the cost of carrying out such work may be recovered.

In regards to the future padmount substation sites required to facilitate the proposed development, please find attached for the applicant's reference a copy Endeavour Energy's 'Guide to Fencing, Retaining Walls and Maintenance Around Padmount Substations'.

• Dial Before You Dig

Before commencing any underground activity the applicant is required to obtain advice from the *Dial Before You Dig* 1100 service in accordance with the requirements of the <u>Electricity Supply Act 1995</u> (NSW) and associated Regulations. This should be obtained by the applicant not only to identify the location of any underground electrical and other utility infrastructure across the site, but also to identify them as a hazard and to properly assess the risk.

Demolition

Demolition work is to be carried out in accordance with Australian Standard AS 2601—2001: 'The demolition of structures'. All electric cables or apparatus which are liable to be a source of danger, other than a cable or apparatus used for the demolition works shall be disconnected ie. the existing customer service lines will need to be isolated and/or removed during demolition. Appropriate care must be taken to not otherwise interfere with any electrical infrastructure on or in the vicinity of the site eg. streetlight columns, power poles, overhead power lines and underground cables etc.

Public Safety

Workers involved in work near electricity infrastructure run the risk of receiving an electric shock and causing substantial damage to plant and equipment. I have attached Endeavour Energy's public safety training resources, which were developed to help general public / workers to understand why you may be at risk and what you can do to work safely. The public safety training resources are also available via Endeavour Energy's website via the following link:

http://www.endeavourenergy.com.au/wps/wcm/connect/ee/nsw/nsw+homepage/commun itynav/safety/safety+brochures

• Emergency Contact

In case of an emergency relating to Endeavour Energy's electrical network, the applicant should note the Emergencies Telephone is 131 003 which can be contacted 24 hours/7 days.

I appreciate that not all the foregoing issues may be directly relevant or significant to the Development Application. However, Endeavour Energy's preference is to alert proponents / applicants of the potential matters that may arise should development within closer proximity

of the existing and/or required electricity infrastructure needed to facilitate the proposed development on or in the vicinity of the site occur.