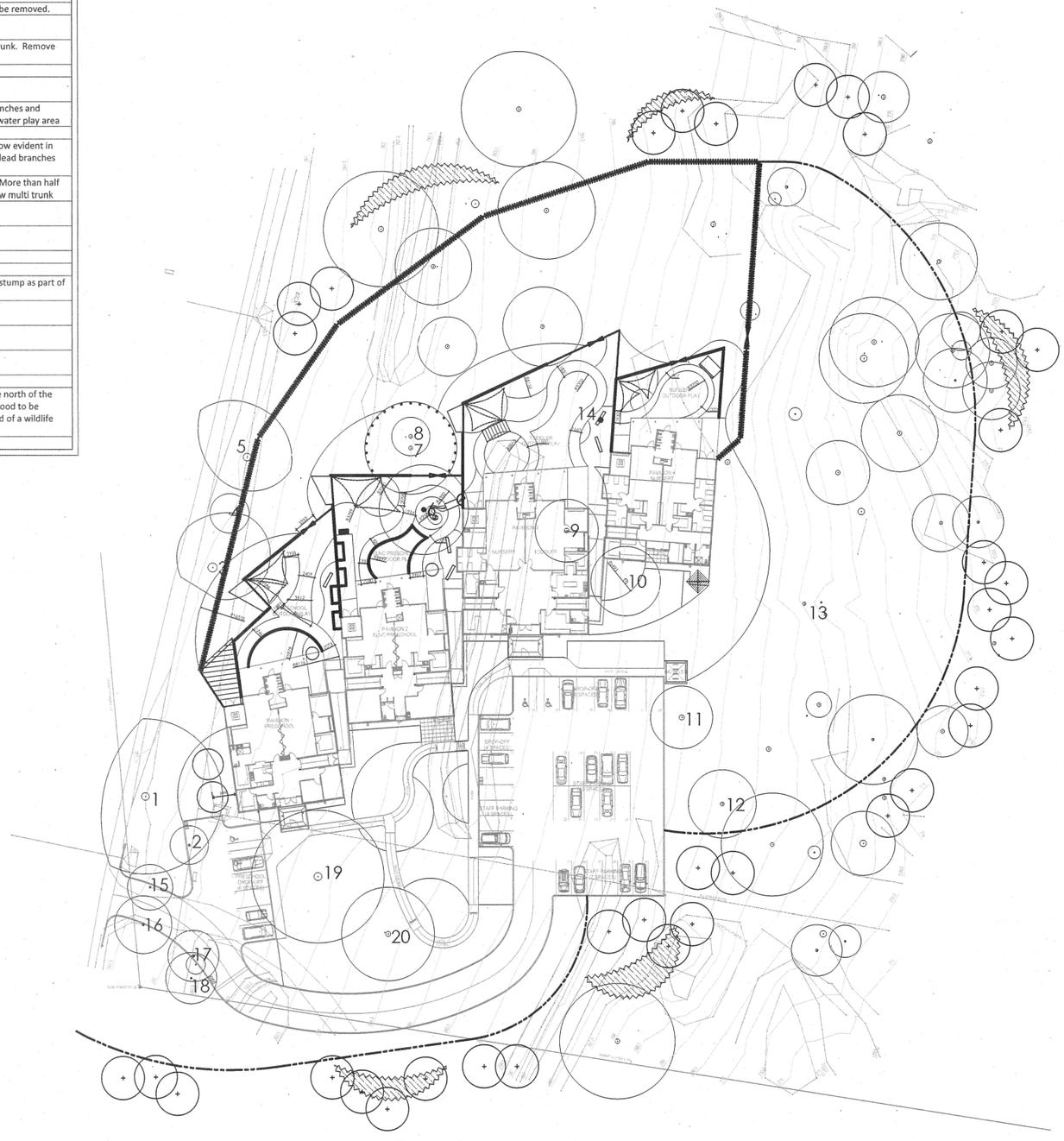
EXISTING TREES

Tree No. Refer site plan for location	DBH Diameter at breast height	Height x canopy	Species	Retained or removed as	Comments
1.	3600mm	20m	E. melliodora	Retained	Dead wood in upper limbs to be removed.
2.	800mm	8m	Brachychiton populneus	Removed road works	Replant Kurrajongs on site
3.	800 + 4200	15-20m	E. melliodora	Retained	Multi trunk- and damage to trunk. Remove dead wood in upper limbs.
4.	800	12m	E. melliodora	Retained	
5.	2500 + 2500	15-20m	E. melliodora	Retained	Multi trunk
6.	1800-1700	15m	E. melliodora (?)	Retained	Multi trunk, remove dead branches and retain as integral element to water play area
7.	2300	20-25m	E. blakelyi	Retained	
8.	900+ 700	10m	E. blakelyi	Retained but monitor health	Multi trunk, poor health. Hollow evident in small second trunk. Remove dead branches and retain
9.	2100 + 600	12-15m	E. melliodora	Removed	Insect damage and die back. More than half the canopy dead. Small hollow multi trunk
10.	850 + 1500+ 900	18m	E. melliodora (?)	Retained	Multi trunk
11.	3500 + 350 + 350	12-15m	E melliodora	Retained but monitor health	Dead limbs, multi trunk
12.	2100	15-18m	E. melliodora	Retained	Single trunk
13.	DEAD				
14	DEAD				Remove dead tree but retain stump as part of the imaginative play zone
15	1100mm	9mx 9m	E. melliodora	Removed as part of road works	
16	1100mm	8m x 8m	E. melliodora	Removed as part of road works	
17	980mm	8m x 8m	E.melliodora	Removed as part of road works	
18	440mm	7m x 8m	E.melliodora	Retained	
19	9000mm	20m+	E.melliodora	Retained	Significant tree hollows to the north of the tree, nesting present. Dead wood to be removed carefully with the aid of a wildlife officer.
20	2660mm	18m x 15m	E.melliodora	Retained	



Legend

- **Asset Protection Zone**
- **Fencing Type 2**
  Snake proof fencing with only one maintenance gate
- **Existing trees ID**
  Refer Table
- **Existing trees to be retained**
- **Existing trees to be removed**
- **Additional Tree planting outside APZ**
  Brachychiton populneus (Kurrajong)
  Eucalyptus melliodora (Yellow Box)
  Eucalyptus albens (White Box)
- **Additional understorey planting areas outside APZ**
  Acacia implexa (Hickory Wattle)
  Acacia montana (Mallee Wattle)
  Acacia decora (Western golden wattle)
  Einada nutans (Climbing saltbush)
  Bothriochloa macra (Red grass)
  Lomandra filiformis/ L. multiflora (Mat rush)
  Dianella revoluta (Blue flax Lily)

Tree protection Zone (TPZ) during construction (as per AS4970 2009)
Fencing to be erected before any machinery or materials are brought into the site and prior to commencement of any works. The TPZ should be secured to restrict all access. The fence shall be a minimum of 1.8m tall of chain wire mesh panels which are held in place with concrete feet (no footings) Shade cloth is not proposed as visual access through the area is desirable. Fence posts should have a diameter greater than 20mm. Signs identifying the TPZ should be placed around the edge of the fence and be located on the western side so it is visible from within the construction site. The lettering of the sign shall comply with AS 1319.

The site features 20 remnant trees and no identifiable understorey as the site is currently being heavily grazed by sheep. Patches of Red Grass (Bothriochloa macra) and Wallaby grass (Danthonia sp.) have been identified closer to the road and along the verge fronting the site. The site includes granite rock outcrops and colonising Olive trees further up slope. No regeneration of trees was noted. The proposed design has attempted to retain as many trees as possible with particular reference to those with hollow bearing limbs. The DA proposes to remove 5 trees. The masterplan illustrates additional trees to be replace those that are removed as well as incorporating additional understorey and mid storey plantings.

The CSU biocertification report classifies the site as being Box Gum Woodland Endangered Ecological Community with a rating of 'Poor'. Poor is an overall appraisal of the quality of vegetation, but that is not to say that there are individual trees on the site that are of higher value. The biocertification report has identified four trees on this site with hollows.

The biocertification report notes the following:
Although none of the study area carries remnant Endangered Ecological Community in good condition, degraded stands may still be of significance for fauna, including several species listed as threatened in NSW or nationally.

Features of significance for fauna include:
Large old trees containing hollows (shelter and breeding sites for bats, some birds, Squirrel Glider)
Large trees, which flower more profusely than younger trees and are of greater value to nectar-feeders and insectivorous species (birds, bats, Squirrel Glider))
Fallen timber (ground-feeding birds, reptiles)
Rocky outcrops (reptile shelter, potential refugia from grazing, although not on this site, due to intensive use by sheep).

The report goes on to note the following management recommendations:

Protect and manage hollow resources. Hollow-bearing trees across the campus should be protected as much as possible. A retention target should be set within defined areas appropriate to the needs of local fauna and future development should consider impacts at a campus-wide scale to ensure hollow resources are not depleted to unsustainable levels.

Bush Fire planning
The preliminary bush fire assessment of the site concludes that a 40m asset protection zone is required around the site to the north, east and south with Nathan Cobb Drive forming the protection barrier to the west. To the north of the centre an outer snake proof fence is proposed which will also form the extent of the APZ this way. To the east, the maintenance track and likely drainage structures will form this zone whilst the access road and capark will contribute to the low fire fuel zone to the south.

The proposed landscape around the building will comply with the standards for Asset Protection zones, most notably including:

Proposing planting away from the building and including plants that are known to be less flammable and to maintain and manage the landscape.

Irrigate the APZ with recycled water to provide additional water to plants in this zone and to keep the area green for bush fire planning purposes.

N

Project Name:
CSU Wagga Campus
CHILD CARE CENTRE

Drawing Title:
Landscape Master Plan
Existing tree assessment

Landscape Architect:
somewhere.
LANDSCAPE ARCHITECTS, DESIGNERS AND DREAMERS
Olde Milong YOUNG NSW 2594
phone: 0268967333
fax: 0268967356
email: alex@somewhere.net.au

Scale: 1:400 @ A1	Date: 06.09.2011
Status: For Approval	Checked By: AD

Project No:	Drawing No:	Rev:
129	L01	B

Philosophy outdoor play spaces

The proposed outdoor areas provide a play rich environment which take their cue from the surrounding landscape which includes rocks, trees and a constant level change. The landscape areas exist on individual podiums so that each area is defined and bound by a level which relates to the corresponding indoor space.

Within the sites are open areas for running, jumping and rolling as well as being used for removable rubber mats and trestle equipment. Paths of various materials and texture are 1:20 gradient to allow for all children to access all places within the site and to explore a destination or to perambulate. Sandpits are located on the western side of each playground. Adjacent to the sand pits are small decks that float over the sand pit as performance spaces as well as enabling imaginative play and views out to the west and north.

The ELNC features integral water play for discovery, experiments and mess, with the water being controlled by the toddlers on the level above to encourage
co- operation and to explore gravity.

Raised vegetable gardens provide a place for children to experiment with growing plants whilst intimate, hidden spaces include rocks for climbing, balance and navigation whilst textured plantings heighten the experience and create varied zones. 'A magic circle' , as an outer zone within the asset protection zone can be used for 'special' outings or shared experiences of all ages.

Indicative species list

Plants chosen are low allergen/ natives/ Mediterranean hardy plantings requiring less water/ lower maintenance. Less flammable plants have also been used as well as plants that have Imaginative shapes, parts of the plants that can be used in imaginative play.
It is envisaged that planting areas are watered via captured rain + stormwater/ fresh water subsurface irrigation (pinned down). Food plantings are close to the veranda so that a fresh water point is possible.

Small evergreen trees:
Hymenosporum flavum (Native Frangipani)
Pittosporum phyllaeriodes (Berrigan)

Deciduous trees:
Pistacia chinensis (Chinese Pistacio)
Fraxinus ornus (Flowering Ash)
Fraxinus raywoodii (Claret Ash)
Ulmus parvifolia (Chinese Elm)

Screening/ taller shrubs:
Attriplex numularia (Saltbush)
Abelia grandiflora (Glossy Abelia)
Hibiscus syriacus Diana (Hibiscus)
Teucrium fruticans (Germander)
Dodonea viscosa subsp. angusttissima (Narrow leaf Hop Bush)
Bursaria spinosa (Sweet Bursaria)
Indigofera australis (Austral Indigo)
Budleja Pink Delight (Buddleja)
Rosmarinus officianalis (Rosemary)

Ground covers: (to hold batters and suppress weeds)
Hardenbergia violacea (Hardenbergia)
Myoporum parvifolium (Boobialla)
Rhagodia spinescens (Salt bush)
Pelargonium peltatum (Geranium)
Santolina chaemyacapris (Cotton Lavander)

Perennials: (seasonal colour and movement)
Salvia Indigo Spires (Sage)
Pervoskia atriplicifolia (Russian Sage)
Lavandula dentata/ intermedia Grosso (Lavender)

Grasses: (texture/ wind play)
Poa labillarderi (Tussock)
Themeda triandra (Kangaroo Grass)
Dichopogan strictus (Chocolate Lily)
Chrysocephalum apiculatum (Yellow Buttons)
Lomandra longifolia (Mat Rush)
Dianella revoluta (Blue Flax Lily)
Dietes grandiflora (Dietes)
Miscanthas Sarabande (Japanese Wind grass)

Additional notes

DOCS requirements for outdoor space:

Play space	Required area (7m2/ child)	Provided area
Nursery	105	105m2
Toddler	224	526m2
ELNC	140	374m2
Preschool	210	292m2

Cancer councils requirements for shade in outdoor play areas:

Playspace	Required shade (2.5m2/ person)	Provided shade (verandas)	Shortfall
Nursery	40m2	46m2	-
Toddler	80m2	55m2	25m2
ELNC	50m2	41m2	9m2
Preschool	75m2	41m2	34m2

It is intended that eventually the shade will be provided by trees but that there may be a short fall in the mean time which could be provided by temporary shade cloth/ and awnings etc.

Kidsafe/ Australian Standard requirements for playgrounds:
Sandpits: Minimum 500mm depth of washed beach sand
Water: No open water greater than 300mm depths unless it is fenced.
Softfall: All equipment with a fall height distance of higher than 500mm, requires certified softfall material, which complies with AS 4422.

Legend

Existing contour

Revised design level
+RL 266.50

Serviceable hard surface area:
Concrete with integral oxide with broom finish
OR Stabilised decomposed granite

Contrasting serviceable hard surface area:
Concrete with integral oxide with trowel finish
OR Stabilised decomposed granite

Timber decks, bridges and balance beams:
Hardwood or modwood (or equivalent) timber boards with Steel under structure.
The heights of decks adjacent to the sand pits are 150mm above the sand level.
Timber bridges include a curved under structure to enable water to flow under and for children to experience crossing over the water.

Rocks:
Site rock relocated and placed in play areas for climbing and crawling.
Rocks will be smooth and free of any sharp edges

Sand pit:
Minimum 500mm depth with integral drainage
Cover to be provided for all sand areas

Gravel zones / or Decomposed Granite:
Outside of play areas only to reduce flammable material around the building and to reduce weeds/ maintenance.

Decomposed Granite:
To flat / imaginative space areas within courtyards to delineate alternative use.

Fencing Type 1
Equivalent to pool fence panels to 1.2m high.
Fences are either set on ground level or on top of retaining walls and timber decks

Fencing Type 2
Snake proof fencing with only one maintenance gate

Raised picking gardens
to 450mm height for children to stand and garden into

Arbours/ pergola
Steel frame with deciduous vines over

Temporary shade structures
It is intended that the proposed trees will eventually provide all the required shade, but that in the mean time built shade structures will be provided over sand pit areas.

Dry/ wet creek bed
The water point is located and controlled by the toddlers in the space above the ELNC. The water falls down the wall into a rock lined swale channel with subterranean pond and pump that then pushes the water back up to the top of the wall. A steel mesh top over the pond restricts access to water. Curved timber bridges allow access over the water line.

Grassed area
Soft leaf Buffalo Stenotaphrum secundatum
Grassed areas as circulation space and for areas for removable equipment

Tree planting
as per indicative lists

Planting areas
as per indicative lists

Retaining walls
Refer to civil drawings for details

Existing trees to be retained
Species noted on dwg L01

Project Name:
CSU Wagga Campus
CHILD CARE CENTRE

Drawing Title:
Landscape Master Plan

Landscape Architect:
somewhere.
LANDSCAPE ARCHITECTS, DESIGNERS AND DREAMERS

Olde Milong YOUNG NSW 2594
phone: 0263847333
fax: 0263847358
email: alex@somewhere.net.au

Scale: 1:200 @ A1		Date: 06.09.2011
Status: For Approval		Checked By: AD
Project No: 129	Drawing No: L02	Rev: B