GEOSCAPES
LANDSCAPE ARCHITECTS

Proposed Data Centre, Lane Cove West, NSW 2066 - SSD 9741

LANDSCAPE DESIGN REPORT – LDR01

Prepared for:

GREENBOX

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Document Status

Issue	Issue	Signature	Date
A	FOR SSD SUBMISSION	BG	18.12.18

1.0 - The Project

The project at Lot 1 in DP1151370, known and referred to within documentation as 1 Sirius Road, comprises of a proposed data centre, including two data halls, main office, substation, loading docks, plant equipment, car parking, road access and associated earthworks and landscaping. The applicant is GreenBox Architecture.

The site has an area of approximately 3.9 hectares and is located within the Lane Cove Council Local Government Area. It is bound by the Sirus Road to the east, Lane Cover River to the west, the M2 and Stringybark Creek to the north and Lane Cover River to the south. A 10m setback is required from the existing bushland which is present to the north, west and south. This setback and other deep soil areas allow for landscape buffer planting to help filter views of the development and integrate the site within its broader environment. As much of the site has been classified by the Bushfire Consultant as being an IPA, identified areas of planting must adhere to 'Planning for Bushfire Protection' guidelines by the NSW RFS.

This design report has been prepared as part of an SSD submission to the Department of Planning and is to be read alongside Geoscapes drawings LDA-00 to LDA-07 and Geoscapes Report LVIA01 - Landscape and Visual Impact Assessment. It addressing the following:

Urban Design & Visual

- *proposed open space and landscaped areas for the overall development*
- *suitable landscaping incorporating locally indigenous species;*

2.0 - Overall Design Approach

2.1 Available Landscaping Areas and Controls

A total area of 13060m2 (33% of site area) is available for landscape planting.

Bushfire Controls provided by Travers Ecology:

Inner Protection Area (IPA) within APZ zones
Fuel loads within the IPA are to be maintained so it does not exceed 4t/ha.

Trees are to be maintained to ensure;

Canopy cover does not exceed 15%
Trees (at maturity) do not touch or overhang the building

Tree canopies (at maturity) should be well spread out and not form a continuous canopy
Lower limbs should be removed up to a height of 2m above ground
Preference should be given to smooth barked and evergreen trees.

Shrubs are to be maintained to ensure;

Large discontinuities or gaps in vegetation
Shrubs should not be located under trees
Shrubs should not form more than 10% of ground cover
Clumps of shrubs should be separated from exposed windows and doors by a distance of at least twice the height of vegetation.

Grass is to be maintained to ensure:

A height of 10cm or less
Leaves and debris is removed.

DCP Controls:

Part E Industrial Development E9
Part E Industrial Development – Locality 1 – Land Off Sirus Road E11 to E13
Part H Bushland Protection
Part J Landscaping

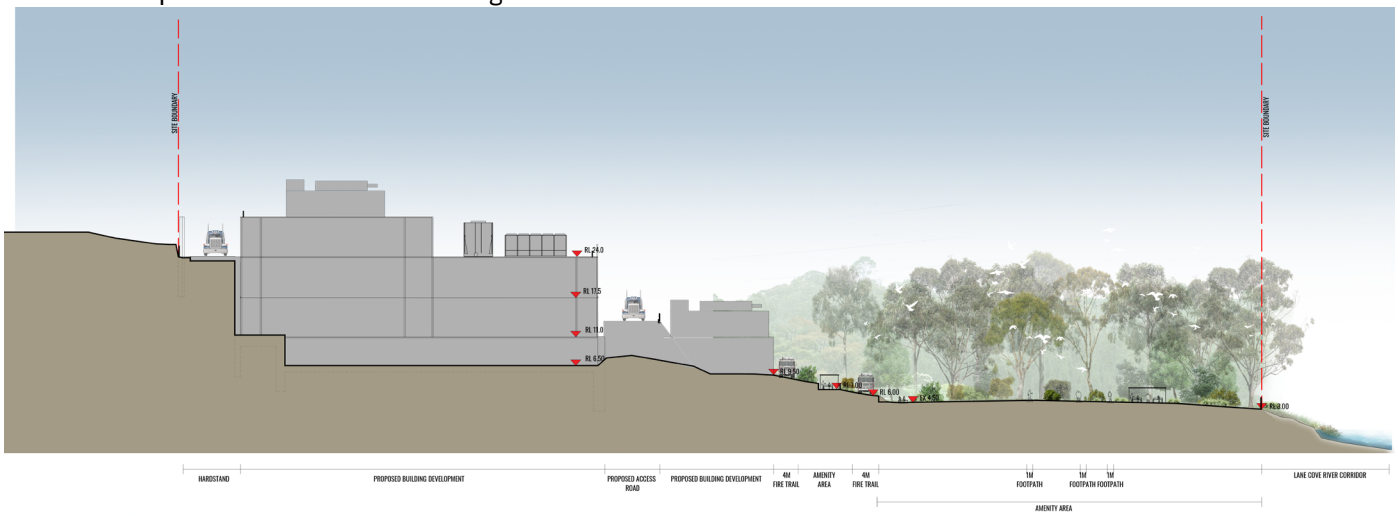
To comply with the DCP, bushfire requirements and VMP, landscaping design aims to provide the following:

- Adhering to the bushfire requirements as set out by Travers Ecology
- Adhering to the VMP requirements as set out by Travers Ecology
- Preservation and retention of existing trees where possible on the advice of the project Arborist
- Strengthen local character with the use of local indigenous species. These are to be selected predominantly from the appendix 1 of the Part J of the Lane Cove Council DCP
- Provision of 10% of the site for Landscape Amenity for workers
- Provision of 33% Landscape Area
- To help screen and filter views of the development for users of the adjacent bushland and visual receptors within the wider context with tree and shrub planting

3.0 – Proposals

3.1 North

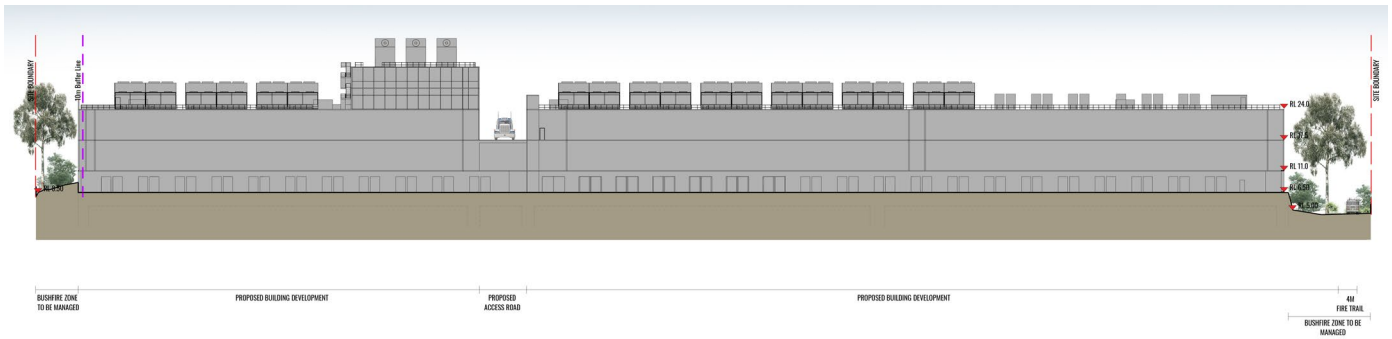
The 10% (4000m2) amenity for workers is proposed in this area. This is due to the existing topography being generally flatter than other parts of the site and the opportunity to enjoy the aspect and close proximity to the Lane Cover River. Turf is intended to be regularly mowed to height of 40mm so that workers can sit and enjoy breaks. Park shelters and seating are also included to provide shade amenity and passive relaxation. Planting of indigenous trees and shrubs and groundcovers are proposed as per the VMP to complement the existing backdrop of adjoining bushland. A 4m fire trail is required to comply with RFS requirements. This is proposed to be a reinforced grid structure with seeding over the top and is to be regularly maintained to prevent windborne seeds taking root.



North South Section

3.2 East and West

An indigenous seed mix of local grasses is proposed to help prevent soil erosion and enable regular slashing/moving to a height of 100mm. Existing trees are retained where possible and additional planting is provided in the form of scattered trees and shrubs. Smooth barked species and evergreen trees and shrubs are preferred.



East to West Section.

3.3 Southern Boundary

This area contains the entry approach from Sirus Road. On the eastern side, existing landscaping associated with the Harley Davidson development is proposed to be retained. On the western side landscape areas exist along the verge and have also been incorporated between the proposed retaining wall and the adjoining development. Native trees, shrubs and mass planted groundcovers have been proposed in these areas.

4.0 – Planting and Schedules

Indigenous plant species for APZ areas have been selected predominantly from Appendix 1 within Part J of the Lane Cove Council DCP. Plant species listed in the VMP have been selected for revegetation areas. This is in response to the objectives for landscaping of new development contained within the Council DCP. All planting will be low water use.

	PROPOSED APZ LANDSCAPE PLANTING						
CODE	**BOTANICAL NAME**	**COMMON NAME**	**MATURE HEIGHT**	**INDIGENOUS**	**SIZE**	**PLANTING DENSITY**	**QTY***
	Trees						
ACM smi	*Acmena smithii*	Lillypilly	10m	✓	5L	As Shown	3
ANG cos	*Angophora costata*	Sydney Red Gum	20m	✓	5L	As Shown	4
ELA ret	*Elaeocarpus reticulatus*	Blueberry Ash	10m	✓	5L	As Shown	4
EUC rac	*Eucalyptus racemosa*	Scribbly Gum	15m	✓	5L	As Shown	4
EUC hae	*Eucalyptus haemastoma*	Scribbly Gum	10m	✓	5L	As Shown	5
EUC sal	*Eucalyptus saligna*	Sydney Blue Gum	30m	✓	5L	As Shown	2
GLO fer	*Glochidion ferdinandi*	Cheese Tree	5m	✓	5L	As Shown	2
MEL nod	*Melaleuca nodosa*	Needle Paperbark	5m	✓	5L	As Shown	9
	Shrubs						
ACA flo	Acacia floribunda	Sally Wattle	6m	✓	5L	As Shown	22
CAL ser	*Callicorma serratifolia*	*Black Wattle*	6m	✓	5L	As Shown	27
HAK ter	*Hakea sericea*	Needle Bush	2m	✓	5L	As Shown	58
HAK ser	*Hakea teretifolia*	Dagger Hakea	2m	✓	5L	As Shown	56
KUN amb	*Kunzea ambigua*	Tick Bush	2m	✓	5L	As Shown	81
LEP pol	*Leptospermum polygalifolium*	Yellow Tea-Tree	3m	✓	5L	As Shown	125
PIT rev	*Pittosporum revolutum*	Yellow Pittosporum	3m	✓	5L	As Shown	90
GRE ser	*Grevillea sericea*	Pink Spider-flower	2m	✓	5L	As Shown	56

	INDIGENOUS NATIVE GRASS SEED MIX	
CODE	**BOTANICAL NAME**	**COMMON NAME**
	Grasses & Sedges	
DIC cri	*Dichelachne crinita*	Long-Hair Plume Grass
NOT lon	*Notodanthonia longifolia*	Wallaby Grass
THE aus	*Themeda australis*	Kangaroo Grass
MIC sti	*Microlaena stipoides*	Microlaena
POA aff	*Poa affinis*	Tussock grass

	SWAMP OAK FLOODPLAIN FOREST - CONTAMINATED LAND		
CODE	**BOTANICAL NAME**	**SIZE**	**QTY***
	Shrubs 1 per 5m2		
BRE obo	*Breynia oblongifolia*	AS PER VMP	48
BUR spi	*Bursaria spinosa subsp. spinosa*	AS PER VMP	56
DOD tri	*Dodonaea triquetra*	AS PER VMP	48
MEL thy	*Melaleuca thymifolia*	AS PER VMP	66
TRE tom	*Trema tomentosa*	AS PER VMP	56
	Groundcovers 4 per 1m2		
ARI vag	*Aristida vagans*	AS PER VMP	425
AUS pub	*Austrostipa pubescens*	AS PER VMP	425
BLE ind	*Blechnum indicum*	AS PER VMP	280
CEN asi	*Centella asiatica*	AS PER VMP	280
COM cya	*Commelina cyanea*	AS PER VMP	360
DIA cae	*Dianella caerulea*	AS PER VMP	600
ECH cae	*Echinopogon caespitosus*	AS PER VMP	220
ENT mar	*Entolasia marginata*	AS PER VMP	220
FIC nod	*Ficinia nodosa*	AS PER VMP	600
GAH cla	*Gahnia clarkei*	AS PER VMP	380
IMP cyl	*Imperata cylindrica*	AS PER VMP	380
JUN usi	*Juncus usitatus*	AS PER VMP	600
LOM lon	*Lomandra longifolia*	AS PER VMP	600
MIC sti	*Microlaena stipoides*	AS PER VMP	600
OPL imb	*Oplismenus imbecillis*	AS PER VMP	280
THE tri	*Themeda triandra*	AS PER VMP	600

	SMOOTH-BARKED APPLE - RED BLOODWOOD OPEN FOREST		
CODE	**BOTANICAL NAME**	**SIZE**	**QTY***
	Canopy Trees 1 per 50m2		
ANG cos	*Angophora costata*	AS PER VMP	4
COR gum	*Corymbia gummifera*	AS PER VMP	4
EUC glo	*Eucalyptus globoidea*	AS PER VMP	3
EUC pil	*Eucalyptus pilularis*	AS PER VMP	3
EUC pip	*Eucalyptus piperita*	AS PER VMP	3
EUC res	*Eucalyptus resinifera*	AS PER VMP	3
EUC scl	*Eucalyptus sclerophylla*	AS PER VMP	3
SYN glo	*Syncarpia glomulifera*	AS PER VMP	3
	Sub-canopy Trees 1 per 30m2		
ACA par	*Acacia parramattensis*	AS PER VMP	2
ALL lit	*Allocasuarina littoralis*	AS PER VMP	3
ELA ret	*Elaeocarpus reticulatus*	AS PER VMP	4
MEL lin	*Melaleuca linariifolia*	AS PER VMP	4
XYL pyr	*Xylomelum pyriforme*	AS PER VMP	3
	Shrubs 1 per 5m2		
ACA lin	*Acacia linifolia*	AS PER VMP	15
ACA lon	*Acacia longifolia*	AS PER VMP	15
BRE obl	*Breynia oblongifolia*	AS PER VMP	8
DOD tri	*Dodonaea triquetra*	AS PER VMP	10
GRE bux	*Grevillea buxifolia*	AS PER VMP	12
GRE ser	*Grevillea sericea*	AS PER VMP	12
KUN amb	*Kunzea ambigua*	AS PER VMP	20
LEP tri	*Leptospermum trinervium*	AS PER VMP	12
LEP pol	*Leptospermum polygalifolium*	AS PER VMP	12
OZO dio	*Ozothamnus diosmifolius*	AS PER VMP	8
PER pin	*Persoonia pinifolia*	AS PER VMP	10
PER lin	*Persoonia linearis*	AS PER VMP	10
WOO pun	*Woollsia pungens*	AS PER VMP	8
ZIE pil	*Zieria pilosa*	AS PER VMP	10
	Groundcovers 4 per 1m2		
ARI vag	*Aristida vagans*	AS PER VMP	180
BLE car	*Blechnum cartilagineum*	AS PER VMP	210
CEN asi	*Centella asiatica*	AS PER VMP	230
DIA cae	*Dianella caerulea*	AS PER VMP	360
DIP var	*Dipodium variegatum*	AS PER VMP	180
ENT str	*Entolasia stricta*	AS PER VMP	110
IMP cyl	*Imperata cylindrica*	AS PER VMP	360
LOM lon	*Lomandra longifolia*	AS PER VMP	360
MIC sti	*Microlaena stipoides*	AS PER VMP	360
OPL aem	*Oplismenus aemulus*	AS PER VMP	210
OPL imb	*Oplismenus imbecillis*	AS PER VMP	230
THE tri	*Themeda triandra*	AS PER VMP	320
	Vines 1 per 20m2		
HAR vio	*Hardenbergia violacea*	AS PER VMP	110
PAN pan	*Pandorea pandorana*	AS PER VMP	110

5.0 – Conclusion

The proposed landscape design will create an indigenous rich environment that will be cohesive with the natural character of the Lane Cove River corridor and bushland. It will also help to mitigate the development from visual receptors by filtering views through vegetation. This will be especially important for those receptors at proximity to the development, while still complying with bushfire and VMP requirements. A low maintenance and low water use philosophy is to be adopted across the design.

An amenity area for the enjoyment of the workers has been included and will provide seating and rest opportunities.