

# East Leppington Public School



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# 1.0 Introduction

## 1.1 GENERAL

This Landscape report has been prepared on behalf of the Department of Education (DoE) and Schools Infrastructure NSW (SINSW) in support of a new school known as East Leppington Primary School, located in Commissioners Drive, Denham Court NSW (the project).

The project is a new school and is State Significant Development (SSD). The SSD Application for the project is identified as SSDA 9477. This Landscape report is to be read in conjunction with the Environmental Impact Statement (EIS) that accompanies SSDA 9476.

The project will provide modern Primary School infrastructure for the existing and future community to meet education needs. The project specifically will provide the following to accommodate up to 1,012 students at completion:

- General learning areas
- Multipurpose hall
- Covered Outdoor Learning Areas (COLA)
- Administration area
- Staff area including amenities
- Student amenities
- Library
- Canteen
- Storage
- Assembly court
- Landscaping
- Pedestrian circulation
- Vehicle circulation, bulk waste pad, staff car parking, bus zone and bicycle storage area
- Internal open space.

The NSW Department of Planning, Industry and Environment (now known as DPIE, and previously known as the Department of Planning and Environment) issued the Secretary's Environmental Assessment Requirements (SEARs) for the project on 10 August 2018. The SEARs identifies the following specific assessment requirements for traffic/acoustics/heritage/etc with respect to SSDA 9476:

## 1.2 SEARS (SSD 9476) RESPONSE

| Requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Taylor Brammer's Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>2. Policies</b> <ul style="list-style-type: none"><li>• Sydney's Cycling Future 2013</li><li>• Sydney's Walking Future 2013</li><li>• Sydney's Bus Future 2013</li><li>• Campbelltown City Council Growth Centre Precincts Development Control Plan 2016.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <ul style="list-style-type: none"><li>• Noted documents have been reviewed for this report</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>4. Built Form and Urban Design</b> <ul style="list-style-type: none"><li>• Address the contextual fit including height, bulk and scale, setbacks and interface of the proposal with the surrounding development, topography, streetscape and public open spaces.</li><li>• Crime Prevention Through Environmental Design Principles.</li><li>• Landscape design, including consideration of equity and amenity of outdoor play spaces, and integration with built form, security, shade, topography and existing vegetation.</li><li>• Demonstrate good environmental amenity including access to natural daylight and ventilation, acoustic separation, access to landscape and outdoor spaces and future flexibility.</li><li>• Aboriginal culture and heritage, to be developed in consultation with the local Aboriginal community and cultural groups and incorporated holistically in the design proposal.</li><li>• ESD principles including sustainability targets and integration of these in design approach.</li></ul> | <ul style="list-style-type: none"><li>• Landscape response creates buffer to edges</li><li>• Planting design to maintain clear sight lines through site.</li><li>• Close collaborate with architect and consultant team integrates buildings in the landscape.</li><li>• Building spaced to allow breezes through to site. Play and open spaces orientated to north for solar access.</li><li>• Research into Dharawal people and integration of indigenous heritage into the landscape scheme.</li><li>• Use of appropriate plant types and maximise shade street planting to minimise heat island effect</li></ul> |
| <b>5. Environmental Amenity</b> <ul style="list-style-type: none"><li>• Identify any proposed use of the school outside of school hours (including weekends) and assess any resultant amenity impacts on the immediate locality and proposed mitigation measures</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <ul style="list-style-type: none"><li>• Car park areas and school hall use by local community potential use of assembly space for community markets. Pedestrian access and fencing designed accordingly.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>7. Transport and Accessibility</b> <ul style="list-style-type: none"><li>• proposed bicycle parking provision, including end of trip facilities, in secure, convenient, accessible areas close to main entries incorporating lighting and passive surveillance.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <ul style="list-style-type: none"><li>• Bike parking i located so that adjacent to the main pedestrian access paths generally between car park and school hall.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                            |

## 1.2 SEARS (SSD 9476) RESPONSE (CONTINUED)

| Requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Taylor Brammer's Response                                                                                                                                                                                                                                                                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>8. Ecologically Sustainable Development (ESD)</b> <ul style="list-style-type: none"> <li>Include a description of the measures that would be implemented to minimise consumption of resources, water (including water sensitive urban design) and energy.</li> </ul>                                                                                                                                                                                                                                                                  | <ul style="list-style-type: none"> <li>Plant selection to be low water use and predominantly indigenous. Rainwater collection tank will store water for use in irrigation to some planted areas.</li> </ul>                                                                                               |
| <b>9. Social Impacts</b> <ul style="list-style-type: none"> <li>Provide details on accessibility and inclusiveness of the proposal for people of differing needs and capabilities.</li> <li>Identify and describe how facilities are to be shared with the community outside of school hours.</li> </ul>                                                                                                                                                                                                                                 | <ul style="list-style-type: none"> <li>All pedestrian access pathways have been designed to comply with AS1428-maximum path grades at 1:20 or less.</li> <li>Carpark and hall to be utilised by the community after hours-pedestrian/fencing is design to suit. Assembly space to be utilised.</li> </ul> |
| <b>10. Heritage</b> <ul style="list-style-type: none"> <li>The visual impacts of the proposed development on views to and from surrounding heritage items.</li> <li>The proposed works on the Upper Canal (SHR no. 01373), taking the Heritage Act 1977 and relevant Water NSW requirements and guidelines into consideration.</li> </ul>                                                                                                                                                                                                | <ul style="list-style-type: none"> <li>Important views retained. Buffer planting to edges to provide visual separation to residential areas.</li> <li>Canal's significance interpreted with curvilinear brick paved footpath east west through the school.</li> </ul>                                     |
| <b>11. Aboriginal Heritage</b> <ul style="list-style-type: none"> <li>Address Aboriginal Cultural Heritage (ACH) in accordance with the Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW (DECCW, 2011) and Aboriginal cultural heritage consultation requirements for proponents 2010 (DECCW).</li> </ul>                                                                                                                                                                                          | <ul style="list-style-type: none"> <li>Aboriginal heritage at the area is significant in the planting design, use of murals, pavement design and outdoor learning areas.</li> </ul>                                                                                                                       |
| <b>16. Drainage</b> <ul style="list-style-type: none"> <li>Detail measures to minimise operational water quality impacts on surface waters and groundwater.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                   | <ul style="list-style-type: none"> <li>Grading of site is designed to direct water to swale systems to allow for soakaway of surface water. Soft surfaces maximised to get rainwater into the ground.</li> </ul>                                                                                          |
| <b>19. Biodiversity Assessment</b> <ul style="list-style-type: none"> <li>Identify and address the requirements of the Biodiversity Conservation Act 2016 relevant to the State significant development application.</li> </ul>                                                                                                                                                                                                                                                                                                          | <ul style="list-style-type: none"> <li>Cumberland Plain Woodland (CPW) identified as the original plant community species. Selection reflects appropriate plant types.</li> </ul>                                                                                                                         |
| <b>Plans and Documents</b> <ul style="list-style-type: none"> <li>Landscape architectural drawings showing key dimensions, RLs, scale bar and north point, including: <ul style="list-style-type: none"> <li>Integrated landscape plans at appropriate scale, with detail of new and retained planting, shade structures, materials and finishes proposed including articulation of playground spaces.</li> <li>Plan identifying significant trees, trees to be removed and trees to be retained or transplanted.</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>Landscape masterplan provided that identifies design principles, masterplan, planting strategy and section elevations.</li> <li>There are no existing trees on the site.</li> </ul>                                                                                |

## 1.3 SUSTAINABILITY REQUIREMENTS - ESD FRAMEWORK

This section shall be read in conjunction with the ESD Master Specification. The ESD master specification includes performance requirements and contractor roles and responsibilities. Hansen Yuncken and the design team are committed to Sustainable design and have adopted an 'ESD Framework' to guide the design and construction of the Building. The ESD Framework has been prepared by Steensen Varming, and draws upon the Green Star Rating System to focus on the inclusion of both relevant and appropriate ESD initiatives, in supporting the primary function of the school. The ESD framework prioritises initiatives that improve occupant comfort, wellbeing and indoor environment quality. In addition, other initiatives have also been targeted to conserve energy, water and material resources.

The ESD Framework utilises a point scoring system which is common to Environmental Rating Systems. The East Leppington Primary School design has targeted 'credits', to achieve an 'equivalent' level of performance with Australian Good Practice. The ESD framework addresses a broad array of sustainability issues and as such, a multitude of building attributes and systems.

The credits relevant to the Landscape design are shown in the ESD Framework within the ESD Master Specification. A general description of how the credit has been achieved is also included in the table to assist in identifying the design feature and components proposed in achieving the credit.

## 2.0 Landscape Design Principles

### 2.1 APPROACH

The proposed school site is located in an area of Western Sydney near the Nepean River and Oran Park.

The approach to the Landscape development is to establish a local school community with a sense of place and belonging with a connection to the environment.

The main elements to be considered include the original natural environment and the European and Indigenous Heritage of the site. These will be combined to offer educational resources to be engaged with by the primary school students.

### 2.2 THE NATURAL ENVIRONMENT

The school site is located within what was once the Cumberland Plain Woodland, the most widespread ecological community found in Western Sydney. It is a community that is currently listed as endangered. The presence of the natural flora and fauna on the proposed site is virtually nil which presents a significant opportunity to bring it back to life.

#### IMPLEMENTATION:

The Cumberland Plain Woodland of western Sydney is a critically endangered ecological community and listed in the Biodiversity Conservation Act 2016.

Within the area, there are visible bodies of water and some remnant riparian bushland and it is intended that these will be referenced within the school landscape by integrating some of the indigenous plant species. The plant species selected will also provide much-needed habitat for native animals in the area and add great educational value to the site.

The Campbelltown Local Government Area (LGA) is unique in that it supports the only disease-free koala population in the Sydney Basin, being unaffected by Chlamydia, therefore planting some habitat and food source trees for the Koala is important.

A selection of shade and screening trees have been included to combat the heat island effect in Summer and address the urban cooling strategies of local and state governments.

Deciduous shade trees have been utilised as cover for the larger paved areas to reduce the Heat Island Effect and provide amenity to the buildings.

The color of the Cumberland Plain woodlands can then be utilised across various landscape elements.



### 2.3 EUROPEAN HERITAGE

The upper canal traverses the landscape to the north of the East Leppington school site. Built in the 1880s it supplies up to 40% of Sydney's water and remains the only way to transfer water from the four upper Nepean Dams. It uses only gravity to transfer water over 64km to Prospect Reservoir.

The canal is significant in its connection to broader Nepean catchment and its role in the provision of water to the city of Sydney. As a man-made element, the canal contrasts the natural watercourses of the region and is noted as being of considerable heritage value.

#### IMPLEMENTATION:

Recognition of the importance of the canal has been addressed by including a sinuous brick-paved pedestrian link across the site.

### 2.4 INDIGENOUS HERITAGE

A recognition of the D'harawal people and their heritage as the original inhabitants of the land on which the school site is located.

The Nepean River was of great importance to the indigenous people for food, shelter, and freshwater. The river banks also provided a protected meeting and gathering place.

The Cumberland Woodland Plain also contains a large body of Aboriginal cultural heritage. This includes open campsites, scarred trees, grinding grooves, stone quarries, rock engravings and other places of social and spiritual life.

The waterways located near the school site are deeply linked to the indigenous history and stories of the area.

The rivers creeks and grasslands were acknowledged as providing important sources of food for the D'harawal people.

The site is situated within a region rich in oral history and stories referencing the local waterways, the indigenous people local to the area were known as Sweet Water Clan meaning they lived where the water came from springs, the rivers ran over rocks and was sweet.

The school site is also located on a pathway used Traditionally for the trip of the D'harawal mobs from Botany Bay to the south-coast followed the southern banks of the Parramatta River westwards, then southwards from about where Parramatta is now towards the Camden-Narrellan are, to Campbelltown, then following Stokes Creek headwaters of the Appin area, crossing over to the northern banks of the Cataract River, then to the Illawarra escarpment, and following the Illawarra escarpment to the south of the Shoalhaven River, thence they made their way east to the coast.

#### IMPLEMENTATION:

*Sweet water clan: lived where the water came from springs and rivers and ran over rocks.*

- Incorporate water play into the landscape with water flowing over rocks/dry creek beds fed by a hand pump located in the play space.

*The Lyre bird is the Ancestral being for the clan.*

- Reference could be made to the Lyre bird through the "nesting mounds" they make and the bush habitat they live in.

*A prominent D'harawal Dreamtime story 'The seven Peacekeepers' From the clan of the Lyrebird, tells an important tale about Conflict and Peace.*

- The Story relates to 7 warriors who in the end are turned into 7 trees which are found in the local area.
- Use of the tree species with reference to the story could be incorporated into the landscape.

### D'harawal Seasons of the Year

- The 6 seasons can be referenced in the landscape by planting the significant native species connected with the season and referencing the stories and activities that accompany the season.

*Mid morning (Waranwarin) – In the experience of the D'harawal Peoples this was a time that children learned best. The children would sit under a "teaching Tree" (a large, spreading tree with branches that reach the ground).*

- Create a special quiet outdoor learning area with a modern "Teaching Tree" for small groups of students to gather underneath.

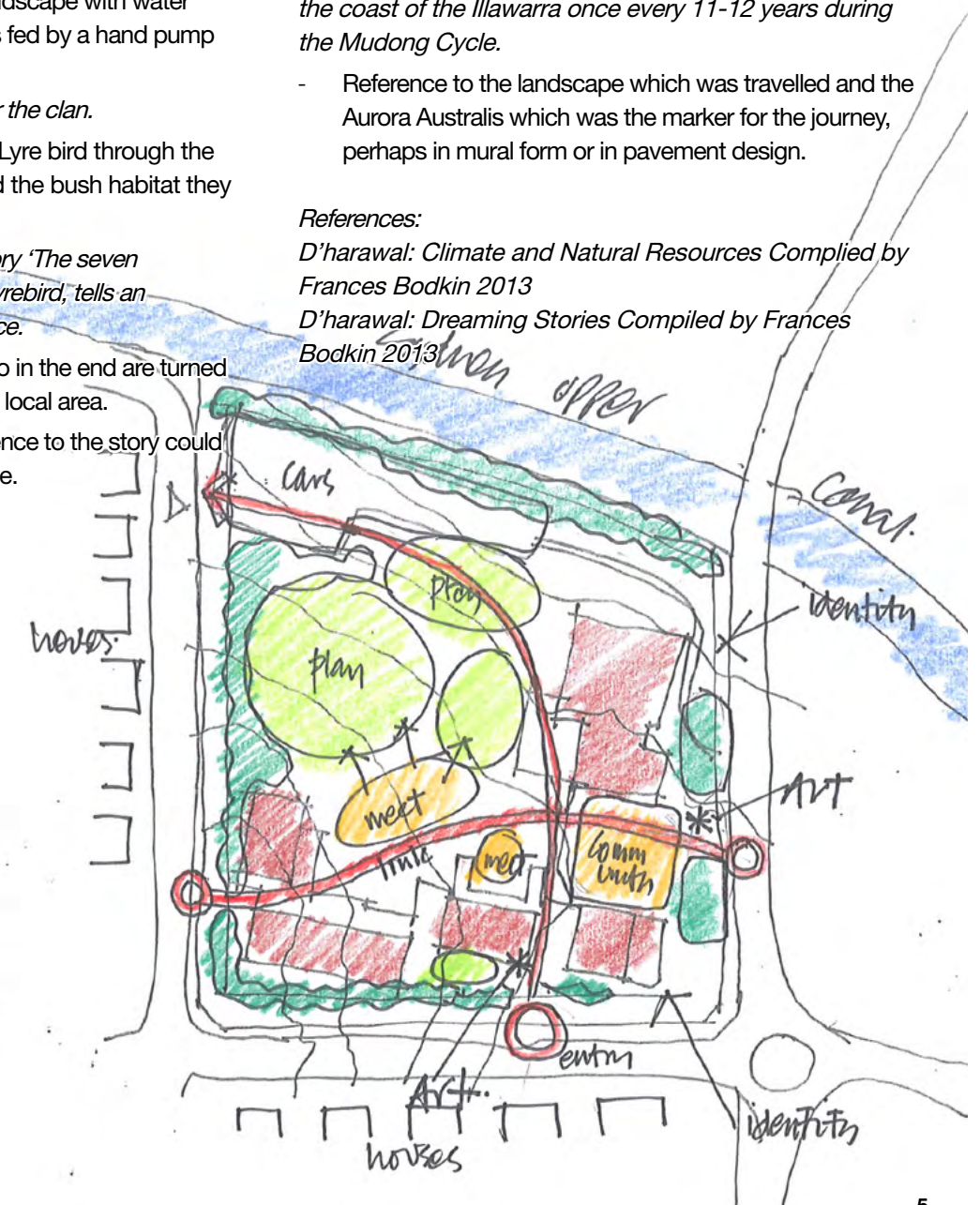
*The school site is located on the north-west storyline where the D'harawal people travelled from Botany Bay to the coast of the Illawarra once every 11-12 years during the Mudong Cycle.*

- Reference to the landscape which was travelled and the Aurora Australis which was the marker for the journey, perhaps in mural form or in pavement design.

#### References:

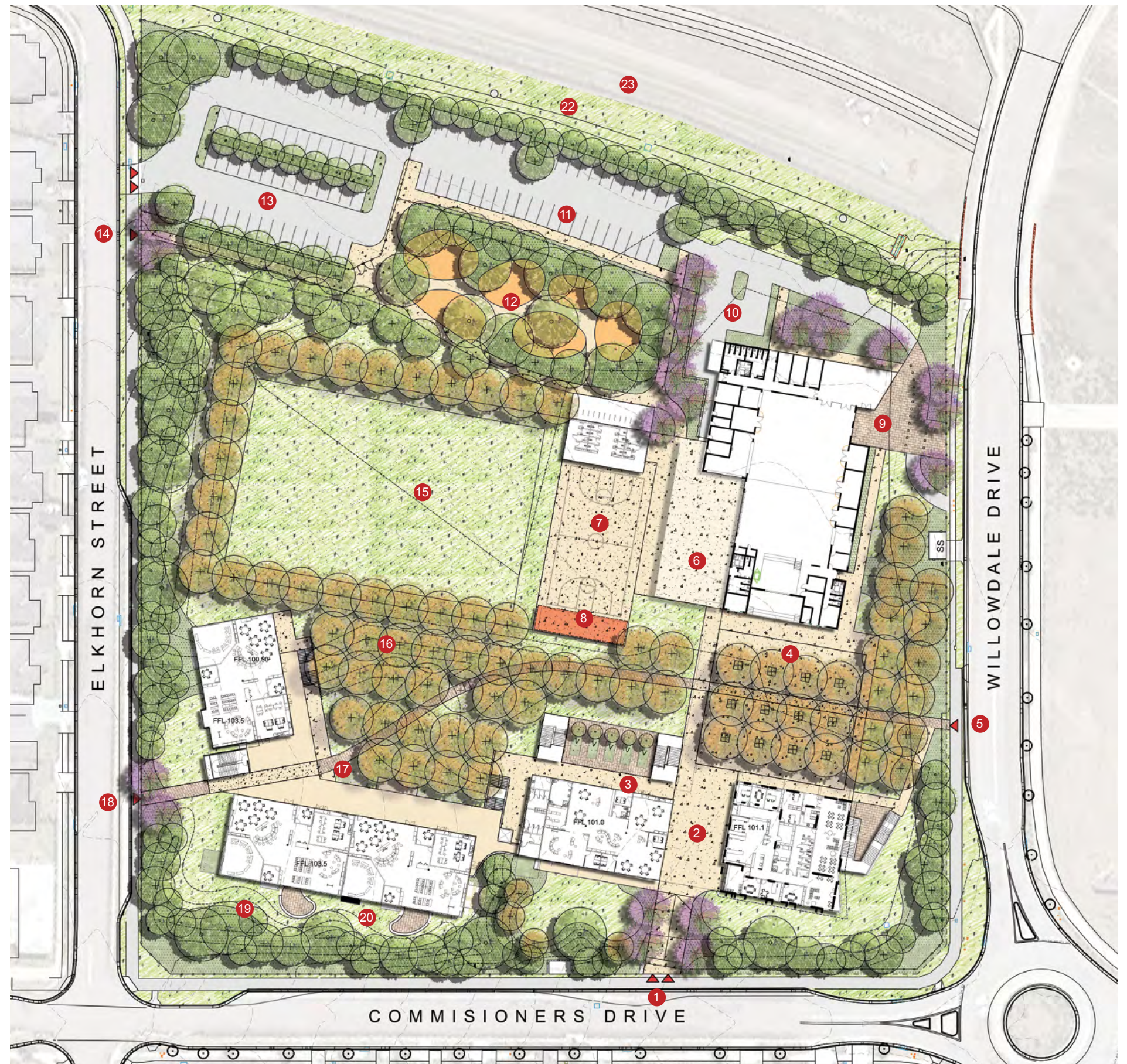
*D'harawal: Climate and Natural Resources Compiled by Frances Bodkin 2013*

*D'harawal: Dreaming Stories Compiled by Frances Bodkin 2013*



### 3.1 LANDSCAPE MASTER PLAN

- 1 MAIN PEDESTRIAN ENTRY – SINGLE GATE AND 6 METER SLIDING GATE.
- 2 COVERED FORECOURT TO ADMINISTRATION OFFICE
- 3 VEGETABLE AND HERB GARDEN
- 4 ASSEMBLY AREA WITH DECIDUOUS TREES CANOPY. POTENTIAL FOR SEATING AREAS, HANDBALL GAMES AND PUBLIC MARKETS
- 5 PEDESTRIAN (PUBLIC AND SCHOOL) ENTRY TO ASSEMBLY / MARKET PLACE
- 6 COLA
- 7 MULTI USE GAMES COURT
- 8 SHELTER TO VIEW GAMES COURT AND PLAYING FIELDS
- 9 PEDESTRIAN FORECOURT TO HALL WITH PAVING, BOLLARDS AND FEATURE TREES
- 10 SERVICE VEHICLE MANOEUVRING AREA
- 11 PUBLIC CAR PARK AREA
- 12 OUTDOOR LEARNING / INDIGENOUS GARDENS
- 13 SCHOOL CAR PARK AREA
- 14 PEDESTRIAN ACCESS POINT
- 15 PLAYING FIELD
- 16 GRASSED EMBANKMENT (1 IN 5 GRADIENT) WITH DECIDUOUS TREES PROVIDES VIEWING OPPORTUNITIES TO PLAYING FIELD
- 17 BRICK PAVED FOOTPATH LINKING WILLOWDALE DRIVE AND ELKHORN STREET – REFERENCING THE UPPER CANAL TO THE NORTH OF THE SCHOOL
- 18 PEDESTRIAN ACCESS POINT HIGHLIGHTED WITH FEATURE TREES
- 19 MOUNDED PLANTING OF SHRUBS AND TREES TO BUFFER THE SCHOOL BUILDING FROM THE RESIDENTIAL AREA
- 20 OUTDOOR LEARNING SPACES LINKING INTERNAL TEACHING AREAS
- 21 SPECIAL NEEDS PLAY AREA – MOUNTED PLANTING PROVIDES SECLUSION FROM THE STREET
- 22 OPEN GRASSED AREA RETAINED TO EXISTING STORMWATER OVERFLOW FUNCTION
- 23 UPPER SYDNEY CANAL



3.2 LANDSCAPE PLANTING APPROACH

The Plant Species have been selected carefully for this site in order to fulfill several Environmental Criteria.

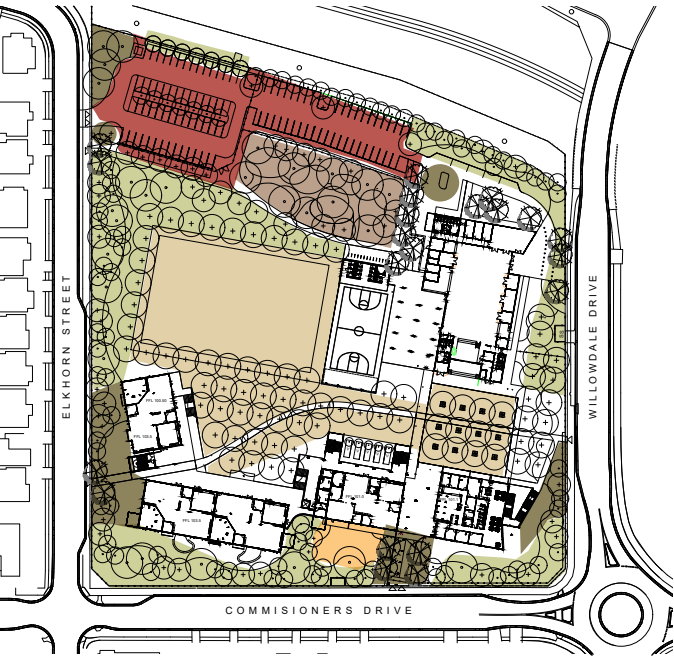
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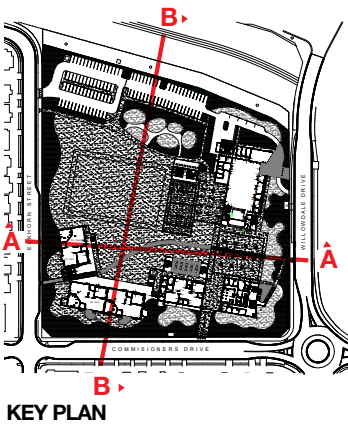
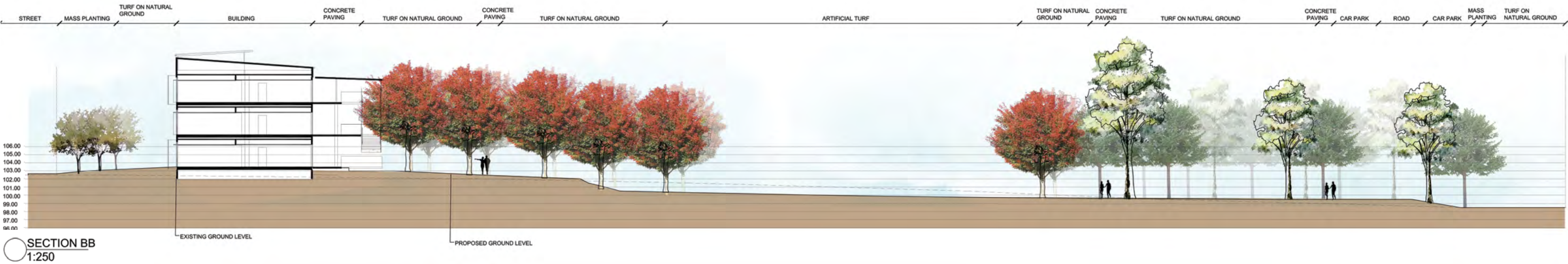
Deciduous shade trees have been utilised as cover for the larger paved areas to reduce the Heat Island Effect and provide amenity to the buildings.



- Perimeter Planting
- Shade Tree Planting
- Playground Planting
- Indigenous Planting
- Car park Planting
- Entry Planting

| SYMBOL                    | BOTANICAL NAME                       | COMMON NAME                 | HIEGHT X WIDTH | PERIMETER | PLAY GROUND | CAR PARK | ENTRY | SHADE TREE | INDIGENOUS CONNECTION |
|---------------------------|--------------------------------------|-----------------------------|----------------|-----------|-------------|----------|-------|------------|-----------------------|
| CUMBERLAND PLAIN WOODLAND |                                      |                             |                |           |             |          |       |            |                       |
| TREES                     |                                      |                             |                |           |             |          |       |            |                       |
| ALI                       | Allocasuarina littoralis             | She Oak                     | 12M X 8M       |           |             |          |       |            |                       |
| AFL                       | Angophora floribunda                 | Rough Barked Apple          | 20M X 15M      |           |             |          |       |            |                       |
| ASU                       | Angophora subvelutina                | Broad leaved Apple          | 18M X 14M      |           |             |          |       |            |                       |
| BMJ                       | Backhousia myrtifolia                | Grey Myrtle                 | 6M X 4M        |           |             |          |       |            |                       |
| CGL                       | Casuarina glauca                     | She Oak                     | 15M X 8M       |           |             |          |       |            |                       |
| EBA                       | Eucalyptus baueriana                 | Blue Box                    | 20M X 10M      |           |             |          |       |            |                       |
| ECR                       | Eucalyptus crebra                    | Narrow Leaved Ironbark      | 18M X 12M      |           |             |          |       |            |                       |
| EFI                       | Eucalyptus fibrosa                   | Grey Black Ironbark         | 18M X 12M      |           |             |          |       |            |                       |
| ESI                       | Eucalyptus sideroxylon               | Mugga Ironbark              | 15M X 12M      |           |             |          |       |            |                       |
| MLI                       | Melaleuca linarifolia                | Snow in Summer              | 7M X 5M        |           |             |          |       |            |                       |
| MST                       | Melaleuca styphilioides              | Prickly Paperbark           | 8M X 5M        |           |             |          |       |            |                       |
| SHRUBS                    |                                      |                             |                |           |             |          |       |            |                       |
| BOB                       | Breynea oblongifolia                 | Coffee Bush                 | 2M X 2M        |           |             |          |       |            |                       |
| BSP                       | Banksia spinulosa                    | Heath Banksia               | 2M X 2M        |           |             |          |       |            |                       |
| CSU                       | Callistemon subulatus                | Bottlebrush                 | 2M X 2M        |           |             |          |       |            |                       |
| CTO                       | Clerodendrum tomentosum              | Hairy Lilly Bush            | 4M X 3M        |           |             |          |       |            |                       |
| DFA                       | Dodonaea falcata                     | Hop Bush                    | 2M X 2M        |           |             |          |       |            |                       |
| DSI                       | Dillwynia sieberi                    | Parrot Pea                  | 2M X 2M        |           |             |          |       |            |                       |
| DUL                       | Daviesia ulicifolia                  | Gorse Bitter                | 2M X 2M        |           |             |          |       |            |                       |
| GJU                       | Grevillea juniperina                 | Juniper Grevillea           | 2M X 2M        |           |             |          |       |            |                       |
| GSE                       | Grevillea sericea                    | Pink Spider Flower          | 2M X 1M        |           |             |          |       |            |                       |
| IAU                       | Indigofera australis                 | Indigo                      | 1M X 1M        |           |             |          |       |            |                       |
| MDE                       | Melaleuca decora                     | White Feather Honey Myrtle  | 6M X 3M        |           |             |          |       |            |                       |
| ODI                       | Ozothamnus diosmifolius              | Sago                        | 2M X 1M        |           |             |          |       |            |                       |
| GROUNDCOVER/CLIMBERS      |                                      |                             |                |           |             |          |       |            |                       |
| AAU                       | Ajuga australis                      | Austral Bugle               | 0.2M X 0.5M    |           |             |          |       |            |                       |
| BSC                       | Billardiera scandens                 | Apple Berry                 | 0.5M X 1M      |           |             |          |       |            |                       |
| GSO                       | Geranium solanderi                   | Native Geranium             | 0.2M X 0.5M    |           |             |          |       |            |                       |
| MST                       | Microlaena stipoides                 | Weeping Meadow Grass        | 0.5M X 1M      |           |             |          |       |            |                       |
| PMI                       | Pultenaea microphylla                | Egg and Bacon Pea           | 0.5M X 1M      |           |             |          |       |            |                       |
| WGR                       | Wahlenbergia gracilis                | Sydney Bluebell             | 0.5M X 0.5M    |           |             |          |       |            |                       |
| WST                       | Wahlenbergia stricta                 | Tall Bluebell               | 0.5M X 0.5M    |           |             |          |       |            |                       |
| KOALA FOOD                |                                      |                             |                |           |             |          |       |            |                       |
| EMO                       | Eucalyptus moluccana                 | Grey Box                    | 25M X 15M      |           |             |          |       |            |                       |
| EPU                       | Eucalyptus punctata                  | Grey Gum                    | 35M X 15M      |           |             |          |       |            |                       |
| ELO                       | Eucalyptus longifolia                | Woollybutt                  | 20M x 15M      |           |             |          |       |            |                       |
| EEU                       | Eucalyptus eugenioides               | Thin Leaved Stringybark     | 30M X 15M      |           |             |          |       |            |                       |
| EGL                       | Eucalyptus globioidea                | White Stringybark           | 30M X 15M      |           |             |          |       |            |                       |
| KOALA SHELTER             |                                      |                             |                |           |             |          |       |            |                       |
| ECR                       | Eucalyptus crebra                    | Narrow Leaf Iron Bark       | 18M X 12M      |           |             |          |       |            |                       |
| EPI                       | Eucalyptus piperta                   | Sydney Peppermint           | 25M X 12M      |           |             |          |       |            |                       |
| SGL                       | Syncarpia glomulifera                | Turpentine                  | 25M X 12M      |           |             |          |       |            |                       |
| DECIDUOUS TREES           |                                      |                             |                |           |             |          |       |            |                       |
| ANS                       | Acer negundo 'Sensation'             | Maple                       | 9M X 6M        |           |             |          |       |            |                       |
| BAC                       | Brachychiton acerifolius             | Illawarra Flame Tree        | 15M X 10M      |           |             |          |       |            |                       |
| FPU                       | Fraxinus pennsylvanica 'Urbanite TM' | Ash                         | 11M X 8M       |           |             |          |       |            |                       |
| LTU                       | Liriodendron tulipefera              | Tulip Tree                  | 12M X 8M       |           |             |          |       |            |                       |
| PUS                       | Pyrus ussuriensis Grafted            | Ornamental Pear             | 9M X 7M        |           |             |          |       |            |                       |
| UPM                       | Ulmus parvifolia 'Murray's Form'     | Elm                         | 10M X 8M       |           |             |          |       |            |                       |
| EVERGREEN TREES           |                                      |                             |                |           |             |          |       |            |                       |
| ACU                       | Araucaria cunninghamii               | Hoop Pine                   | 40M X 15M      |           |             |          |       |            |                       |
| AFL                       | Agonis flexuosa                      | WA Peppermint               | 10M X 5M       |           |             |          |       |            |                       |
| BIN                       | Banksia integrifolia                 | Coast Banksia               | 15M X 6M       |           |             |          |       |            |                       |
| BPO                       | Brachychiton populneus               | Kurrajong                   | 10M X 8M       |           |             |          |       |            |                       |
| ERE                       | Elaeocarpus reticulatus              | Blueberry Ash               | 8M X 6M        |           |             |          |       |            |                       |
| GPA                       | Geijera parviflora                   | Wilga                       | 9M X 8M        |           |             |          |       |            |                       |
| HTI                       | Hibiscus tiliaceus Rubra             | Native Hibiscus             | 6M X 4M        |           |             |          |       |            |                       |
| CLI                       | Citrus limon                         | Lemon Tree                  | 3M X 2M        |           |             |          |       |            |                       |
| LCO                       | Lophostemon confertus                | QLD Brush Box               | 15M X 10M      |           |             |          |       |            |                       |
| SCREENING PLANTS          |                                      |                             |                |           |             |          |       |            |                       |
| ACS                       | Acmena 'Cherry Surprise'             | Dwarf Lilly Pilly           | 3M X 2M        |           |             |          |       |            |                       |
| AHI                       | Angophora hispida                    | Dwarf Angophora             | 7M X 5M        |           |             |          |       |            |                       |
| BCE                       | Buckinghamia celsissima              | Ivory Curl Tree             | 7M X 4M        |           |             |          |       |            |                       |
| BGC                       | Banksia 'Giant Candles'              | Giant Candles               | 5M X 4M        |           |             |          |       |            |                       |
| BLI                       | Baeckea linifolia                    | Myrtle Heath                | 2M X 3M        |           |             |          |       |            |                       |
| BSE                       | Banksia serrata                      | Old Man Banksia             | 4M X 3M        |           |             |          |       |            |                       |
| BSE                       | Banksia 'Sentinel'                   | Dwarf Coast Banksia         | 3M X 2M        |           |             |          |       |            |                       |
| CGW                       | Casuarina 'Green Wave'               | Dwarf She Oak               | 2M X 2M        |           |             |          |       |            |                       |
| CCP                       | Callistemon salignus 'Perth Pink'    | Dwarf Bottlebrush           | 4M X 3M        |           |             |          |       |            |                       |
| GNP                       | Grevillea 'Red Hooks'                | Toothbrush Grevillea        | 2M X 3M        |           |             |          |       |            |                       |
| LLH                       | Leptospermum Lemon Hedge'            | Dwarf Lemon Tea Tree        | 3M X 2M        |           |             |          |       |            |                       |
| LPO                       | Leptospermum polygalifolium          | Manuka                      | 4M X 3M        |           |             |          |       |            |                       |
| MLS                       | Melaleuca linarifolia 'Seafoam'      | Dwarf Honey Myrtle          | 3M X 3M        |           |             |          |       |            |                       |
| PLI                       | Persoonia linearis                   | Geebung                     | 3M X 3M        |           |             |          |       |            |                       |
| PTO                       | Pittosporum tobira                   | Australia Laurel            | 4M X 3M        |           |             |          |       |            |                       |
| SMALL/MEDIUM SHRUBS       |                                      |                             |                |           |             |          |       |            |                       |
| AMC                       | Acacia 'Mini Cog'                    | Dwarf River Wattle          | 0.5M X 1.5M    |           |             |          |       |            |                       |
| BRC                       | Banksia 'Roller Coaster'             | Prostrate coast banksia     | 0.5M X 2M      |           |             |          |       |            |                       |
| BVD                       | Baeckea virgata Dwarf                | Dwarf myrtle Heath          | 1M X 1M        |           |             |          |       |            |                       |
| CGJ                       | Callistemon 'Green John'             | Dwarf Bottlebrush           | 1M X 1M        |           |             |          |       |            |                       |
| GCC                       | Grevillea 'Cherry Clusters'          | Red spider Flower           | 0.5M X 1M      |           |             |          |       |            |                       |
| HDD                       | Hebe diosmifolia Dwarf               | White Veronica              | 1M X 1M        |           |             |          |       |            |                       |
| LFS                       | Leptospermum 'Fore Shore'            | Dwarf Coast Tea Tree        | 1M X 1M        |           |             |          |       |            |                       |
| MTH                       | Melaleuca thymifolia                 | Honey Myrtle                | 1M X 1M        |           |             |          |       |            |                       |
| OMI                       | Olearia microphylla                  | Daisy Bush                  | 1M X 1M        |           |             |          |       |            |                       |
| REQ                       | Russelia equisetiformis              | Horse Tails                 | 1M X 1M        |           |             |          |       |            |                       |
| WSM                       | Westringia 'Smokey'                  | Coast Rosemary              | 1M X 1M        |           |             |          |       |            |                       |
| GROUNDCOVERS AND GRASSES  |                                      |                             |                |           |             |          |       |            |                       |
| ALO                       | Anigozanthos 'Landscape Orange'      | Kangaroo Paw                | 1M X 1M        |           |             |          |       |            |                       |
| AMO                       | Aloe 'Mighty Orange'                 | Aloe vera                   | 0.7M X 0.7M    |           |             |          |       |            |                       |
| CAP                       | Chrysoccephalum apiculatum           | Yellow Buttons              | 0.2M X 1M      |           |             |          |       |            |                       |
| CAP                       | Carex appressa                       |                             | 0.7M X 0.7M    |           |             |          |       |            |                       |
| CCI                       | Casuarina 'Cousin It'                | Prostrate she oak           | 0.2M X 1M      |           |             |          |       |            |                       |
| CMA                       | Convulvulus mauritanicus             |                             | 0.2M X 1M      |           |             |          |       |            |                       |
| CWH                       | Carpobrotus 'White Hot'              | White Pig Face              | 0.2M X 1M      |           |             |          |       |            |                       |
| DCA                       | Dianella caerulea                    | Flax                        | 0.7M X 1M      |           |             |          |       |            |                       |
| EBH                       | Eremophila 'Blue Horizon'            | Prostrate Emu Bush          | 0.2M X 1M      |           |             |          |       |            |                       |
| FNO                       | Ficinia nodosa                       | Knobby Club rush            | 0.7M X 0.7M    |           |             |          |       |            |                       |
| GGG                       | Grevillea 'Gin Gin Gem'              | prostrate red spider flower | 0.2M X 1M      |           |             |          |       |            |                       |
| LIT                       | Lomandra 'Lime Tuff'                 | Dwarf Lomandra              | 0.7M X 0.7M    |           |             |          |       |            |                       |
| LNY                       | Lomandra Nyallia                     | Dwarf Lomandra              | 1M X 1M        |           |             |          |       |            |                       |
| RAF                       | Rhagodia 'Aussie Flat Bush'          | Prostrate salt bush         | 0.4M X 1M      |           |             |          |       |            |                       |
| SSE                       | Scenicio serpens                     | Chalk Sticks                | 0.2M X 1M      |           |             |          |       |            |                       |
| TAU                       | Themeda australis                    | Kangaroo Grass              | 1M X 1M        |           |             |          |       |            |                       |
| TMI                       | Themeda 'Mingo'                      | Prostrate Kangaroo Grass    | 0.2M X 1M      |           |             |          |       |            |                       |
| FERNS/PALMS AND SHADE     |                                      |                             |                |           |             |          |       |            |                       |
| AMO                       | Acanthus mollis                      | Oyster Plant                | 1M X 1M        |           |             |          |       |            |                       |
| CCO                       | Cyathea cooperi                      | Rough Tree Fern             | 5M X 2M        |           |             |          |       |            |                       |
| DAS                       | Doodia aspera                        | Rasp Fern                   | 0.3M X 1M      |           |             |          |       |            |                       |
| HFL                       | Hymenoporus flavum 'Luscious'        | Dwarf Native Frangipani     | 0.6M X 1M      |           |             |          |       |            |                       |
| PAR                       | Plectranthus argentatus              | Silver Shield               | 0.5M X 1M      |           |             |          |       |            |                       |
| LAU                       | Livistona australis                  | Cabbage Tree Palm           | 20M X 5M       |           |             |          |       |            |                       |
| PIN                       | Prostanthera incisa                  | Mint Bush                   | 2M X 2M        |           |             |          |       |            |                       |
| PXA                       | Philodendrum Xanadu                  | Zanada                      | 0.5M X 0.5M    |           |             |          |       |            |                       |
| VHE                       | Viola hederacea                      | Native Violet               | 0.1M X 1M      |           |             |          |       |            |                       |
| TRA                       | Stipa rammosissima                   | Bamboo Grass                | 1M X 1M        |           |             |          |       |            |                       |

3.3 LANDSCAPE CROSS SECTIONS



# EAST LEPPINGTON PRIMARY SCHOOL

## LANDSCAPE WORKS SCHEMATIC DESIGN PACKAGE

Prepared for:  
HANSEN YUNCKEN

Prepared by:  
Taylor Brammer Landscape Architects Pty Ltd

| DWG NO. | DRAWING TITLE                   | SCALE     |
|---------|---------------------------------|-----------|
| L000    | Landscape: Cover Sheet          | NTS @A1   |
| L100    | Landscape: Finishes Plan        | 1:500@ A1 |
| L200    | Landscape: Grading Plan         | 1:500@ A1 |
| L300    | Landscape: Planting Plan        | 1:500@ A1 |
| L400    | Landscape: Cross Sections       | 1:250@ A1 |
| L401    | Landscape: Cross Sections       | 1:250@ A1 |
| L500    | Landscape: Specification        | NTS@ A1   |
| L600    | Landscape: Construction Details | As shown  |

### LEGEND

#### Boundaries & Services

|  |                       |
|--|-----------------------|
|  | SITE BOUNDARY         |
|  | SUB STATION           |
|  | EXISTING STREET LIGHT |
|  | FIRE HYDRANT          |

#### Levels

|  |                     |
|--|---------------------|
|  | EXISTING CONTOUR    |
|  | PROPOSED CONTOUR    |
|  | PROPOSED SPOT LEVEL |
|  | TOP OF WALL LEVEL   |

#### Hardscape

|  |                            |
|--|----------------------------|
|  | CONCRETE PAVING            |
|  | BRICK PAVING               |
|  | RETAINING WALL             |
|  | TERRACE STEPS              |
|  | EDGING                     |
|  | PAINTED ACRYLIC HARD COURT |

#### Softscape

|  |                                  |
|--|----------------------------------|
|  | MASS PLANTING BED                |
|  | VEGETABLE GARDEN                 |
|  | STRUCTURED PLAY/ SOFTFALL FINISH |
|  | OUTDOOR LEARNING AREA            |
|  | TURF                             |
|  | TREE PLANTING IN PAVING          |
|  | NATIVE EVERGREEN PLANTING        |
|  | DECIDUOUS TREE PLANTING          |
|  | FEATURE TREE PLANTING            |

#### Furniture and Fixtures

|  |                |
|--|----------------|
|  | GATE / FENCE   |
|  | FENCE LOCATION |
|  | BOLLARD        |



LOCATION PLAN  
1:1000

| REV | BY | DATE     | DESCRIPTION            |
|-----|----|----------|------------------------|
| A   | IB | 21.07.19 | ISSUED FOR INFORMATION |
| B   | IB | 29.08.19 | ISSUED FOR INFORMATION |
| C   | IB | 30.08.19 | 100% SCHEMATIC DESIGN  |
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PERUMAL PEDAVOLI ARCHITECTS

EAST LEPPINGTON PS  
NEW HIGH QUALITY CLASSROOMS  
DRAWING NAME  
LANDSCAPE: COVER SHEET

PROJECT NORTH

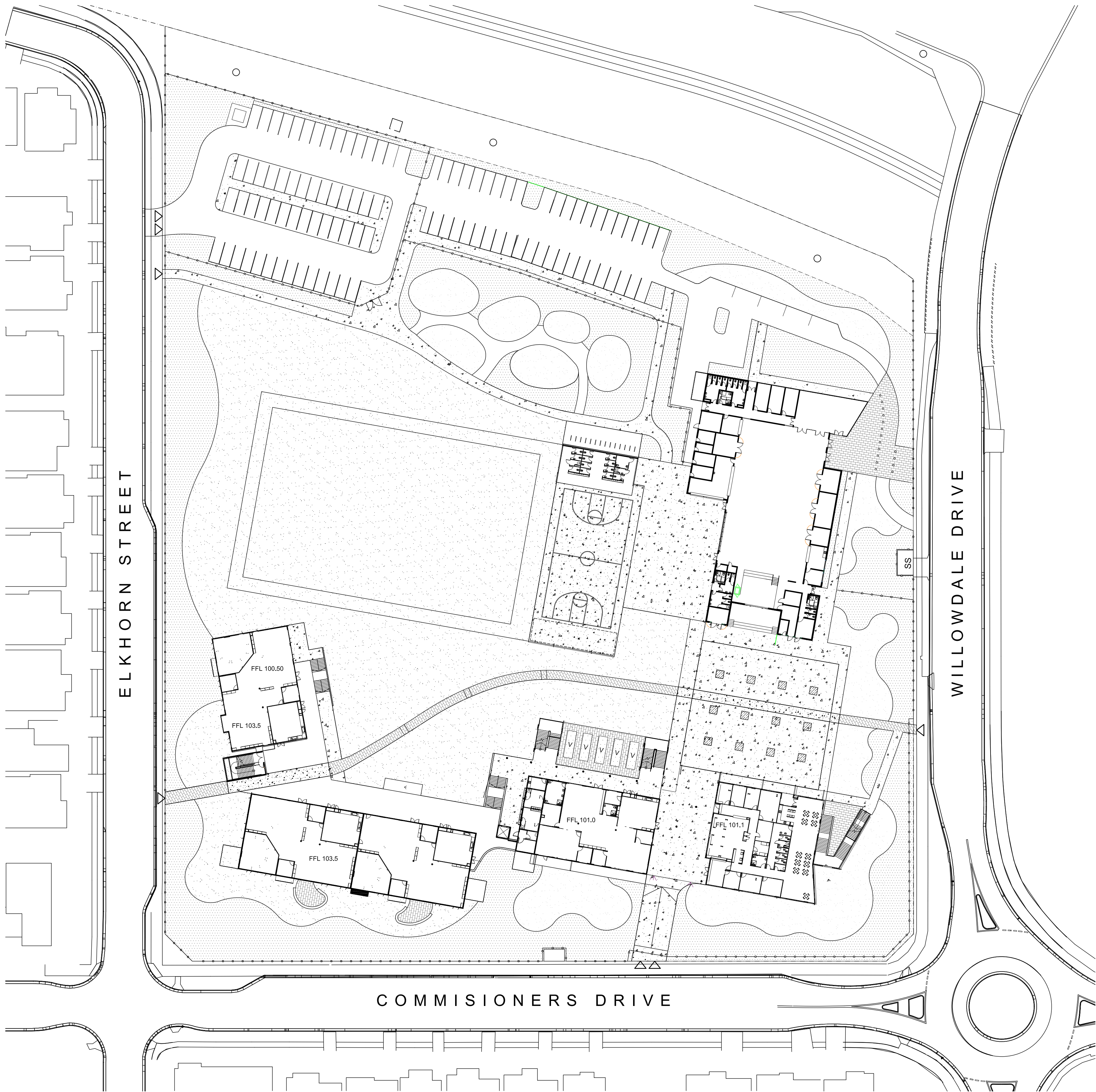
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| JT    | IB      | IB       | 30 AUGUST 2019 |

DRAWING NUMBER: L000 NTS @ A1 REVISION

|                            |           |       |      |         |
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| PROJECT CODE               | SCH. REF. | DISC. | TYPE | SERIES# |
| NHQC2 - LP - LA -DWG -L000 |           |       |      |         |

C



| AMMENDMENTS |    |          |                        |  |
|-------------|----|----------|------------------------|--|
| REV         | BY | DATE     | DESCRIPTION            |  |
| A           | VL | 15.07.19 | ISSUED FOR INFORMATION |  |
| B           | IB | 02.08.19 | ISSUED FOR INFORMATION |  |
| C           | IB | 21.08.19 | ISSUED FOR INFORMATION |  |
| D           | IB | 29.08.19 | ISSUED FOR INFORMATION |  |
| E           | IB | 29.08.19 | ISSUED FOR INFORMATION |  |
| F           | IB | 30.08.19 | 100% SCHEMATIC DESIGN  |  |

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EAST LEPPINGTON PS  
NEW HIGH QUALITY CLASSROOMS

DRAWING NAME  
LANDSCAPE: FINISHES PLAN

PROJECT NORTH

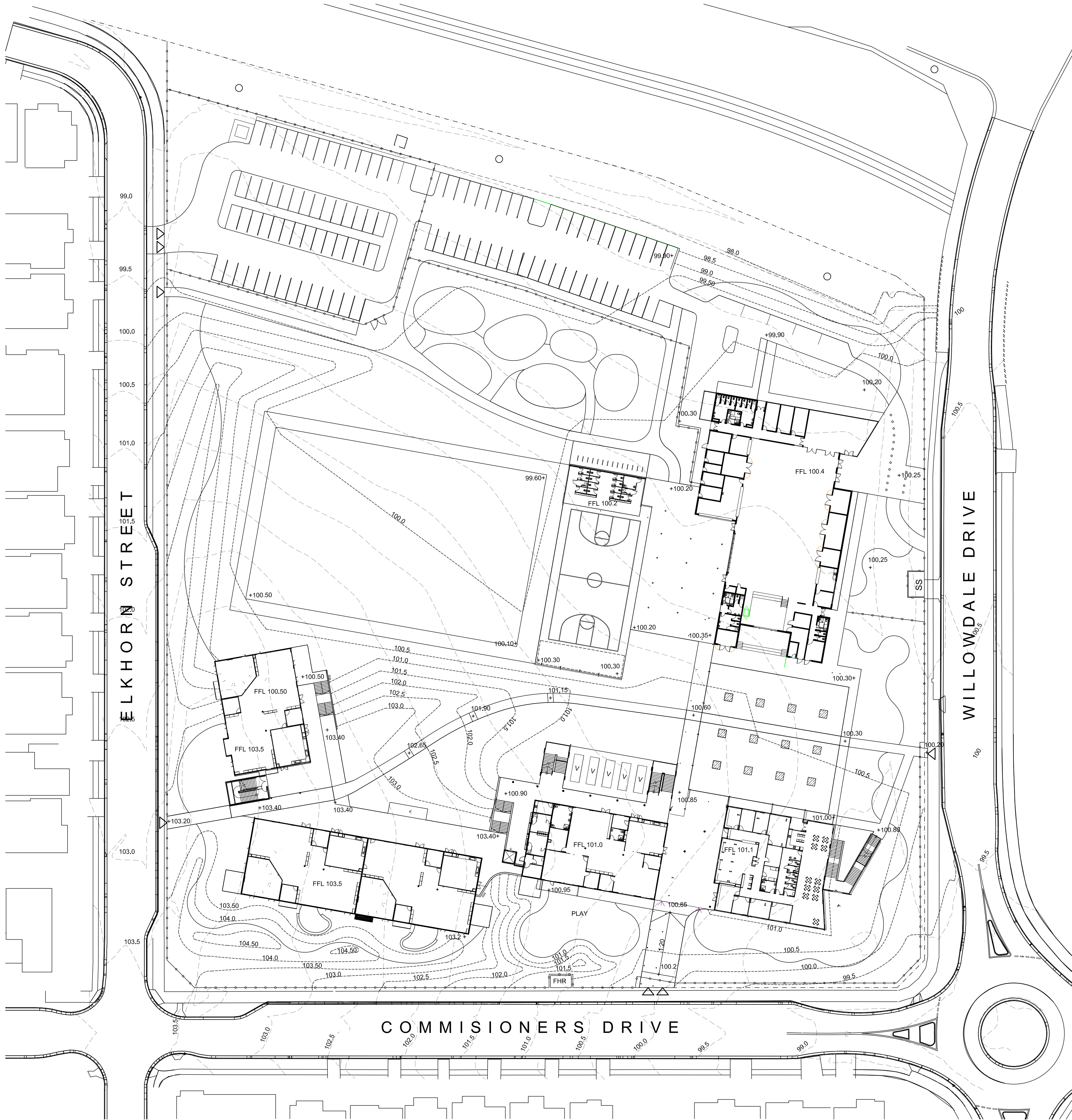
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DRAWING NUMBER: L100 SCALE: 1:500 @ A1 REVISION

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| PROJECT CODE    | SCH. REF. | DISC. | TYPE | SERIES# |
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**F**



| AMMENDMENTS |    |          |  | DESCRIPTION            |
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| REV         | BY | DATE     |  |                        |
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| B           | IB | 02.08.19 |  | ISSUED FOR INFORMATION |
| C           | IB | 21.08.19 |  | ISSUED FOR INFORMATION |
| D           | IB | 29.08.19 |  | ISSUED FOR INFORMATION |
| E           | IB | 29.08.19 |  | ISSUED FOR INFORMATION |
| F           | IB | 30.08.19 |  | 100% SCHEMATIC DESIGN  |
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PERUMAL PEDAVOLI ARCHITECTS

EAST LEPPINGTON PS  
NEW HIGH QUALITY CLASSROOMS  
DRAWING NAME  
LANDSCAPE: GRADING PLAN

PROJECT NORTH

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| DRAWN | CHECKED | VERIFIED | DATE           |
| JT    | IB      | IB       | 30 AUGUST 2019 |

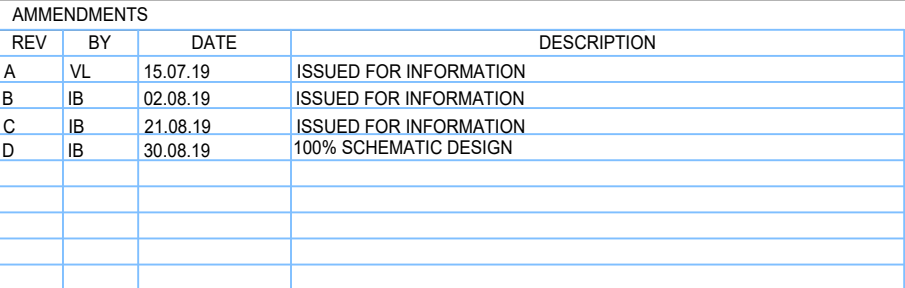
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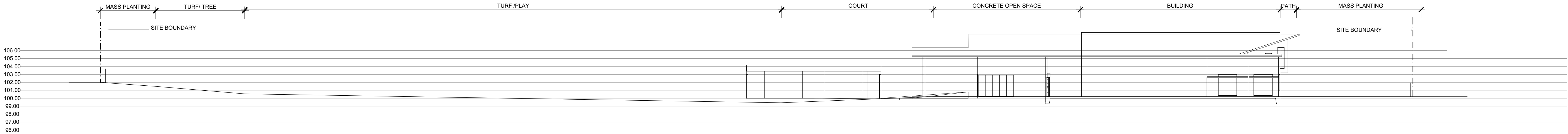
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REVISION

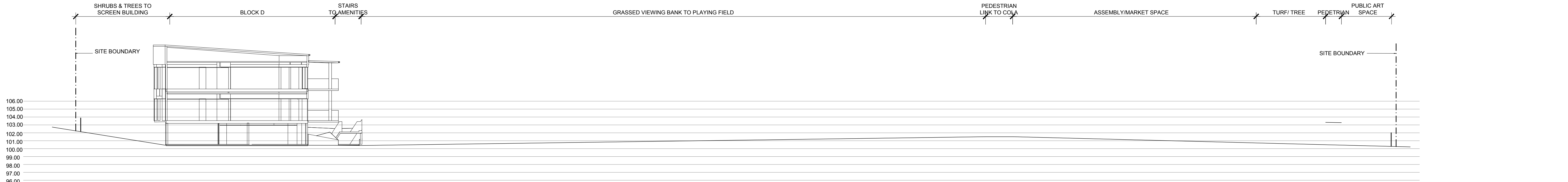
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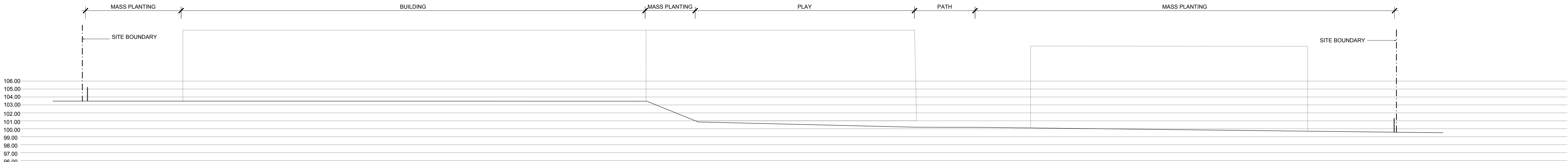




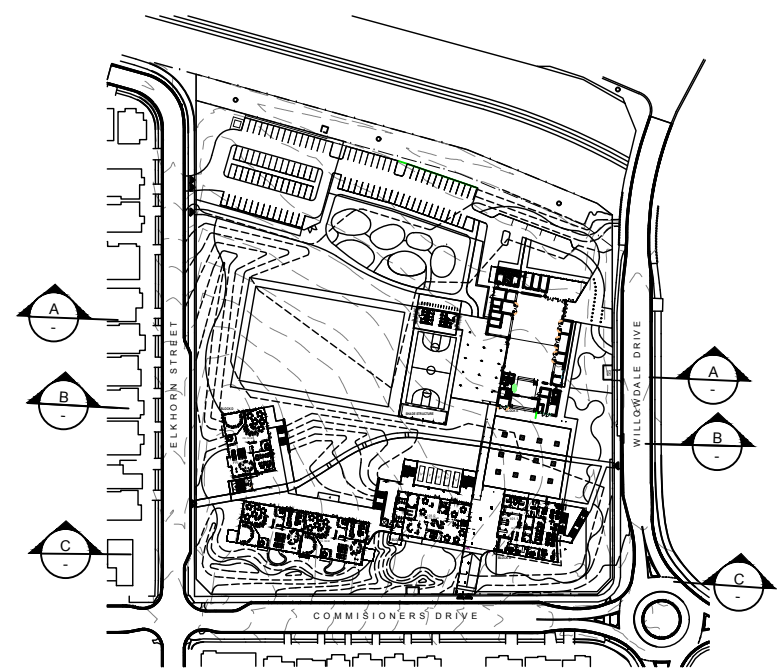
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SECTION BB  
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SECTION CC  
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| AMMENDMENTS |    |          |                        | DESCRIPTION |
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| B           | IB | 30.08.19 | 100% SCHEMATIC DESIGN  |             |
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PEDAVOLI

ARCHITECTS

EAST LEPPINGTON PS  
NEW HIGH QUALITY CLASSROOMS

DRAWING NAME  
LANDSCAPE: CROSS SECTIONS

PROJECT NORTH

0 2.5 5 10 15 20 25m

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| DRAWN | CHECKED | VERIFIED | DATE           |
| AMN   | IB      | IB       | 30 AUGUST 2019 |

DRAWING NUMBER: L400

SCALE: 1:250 @ A1

SERIES#

REVISION

PROJECT CODE

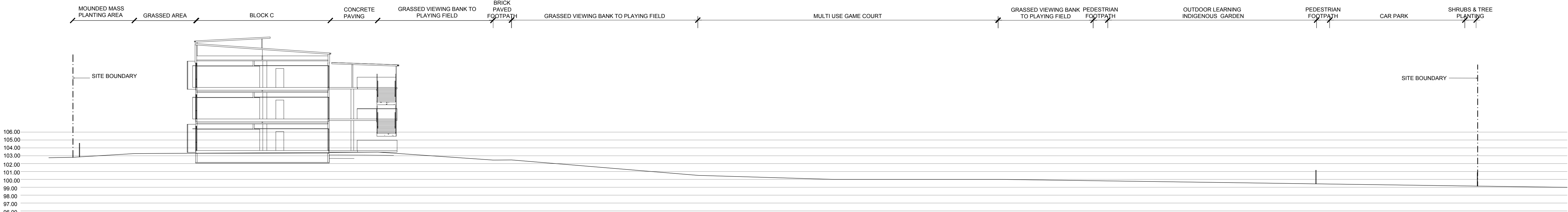
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DISC.

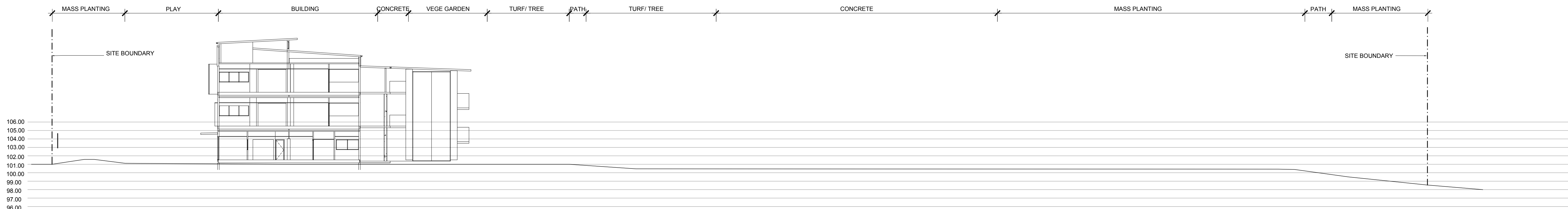
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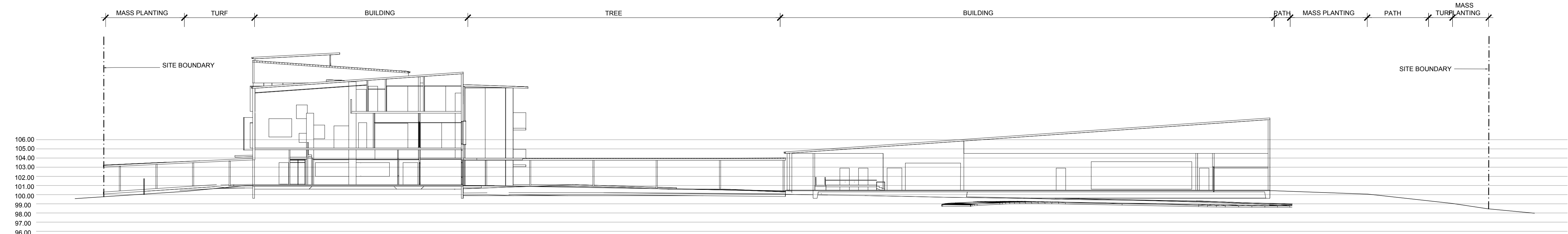
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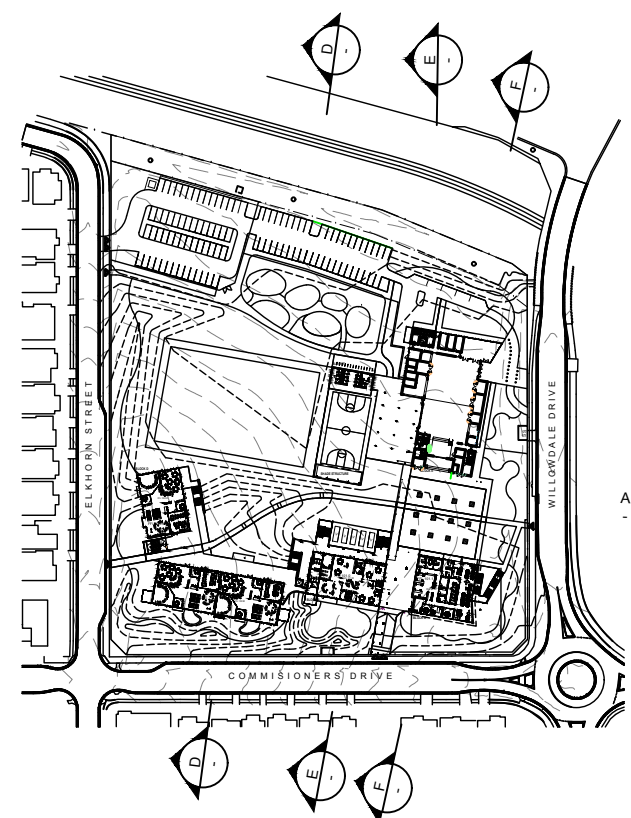
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| AMMENDMENTS |    |          |  | DESCRIPTION            |
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| A           | IB | 21.08.19 |  | ISSUED FOR INFORMATION |
| B           | IB | 30.08.19 |  | 100% SCHEMATIC DESIGN  |
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EAST LEPPINGTON PS  
NEW HIGH QUALITY CLASSROOMS

DRAWING NAME  
LANDSCAPE: CROSS SECTIONS

PROJECT NORTH

0 2.5 5 10 15 20 25m

PROJECT CODE SCH. REF. DISC. TYPE SERIES#  
NHQC2 - LP - LA -DWG -L401

REVISION

B

Specification Notes

1.0 SERVICES

Before landscape work is commenced. The Landscape Contractor is to establish the position of all services/lines and ensure tree planting is to be carried out at least 3 metres away from these services. Service lids, vents and hydrants shall be left exposed and not covered by any landscape finishes (turfing, paving, garden beds etc.) Finish adjoining surfaces flush with pit lids.

Dial Before You Dig - It is the landscape contractor's full responsibility to complete a full services search and take all required measures to ensure protection of these services including potholing to confirm locations. The client in no way will be held responsible for any damage caused to services as a result of the contract works.

Excavation

Do not excavate by machine within 1m of existing underground services.

2.0 SOILS

MASS PLANTING MIXTURE

Shall be homogenous blend of soil and additives in the following proportions:

|                  |     |
|------------------|-----|
| Imported Topsoil | 50% |
| Compost          | 30% |
| D/W Sand         | 20% |

VEGETABLE GARDEN

Shall be homogenous blend of soil and additives in the following proportions:

|                            |     |
|----------------------------|-----|
| Imported Black Soil        | 30% |
| D/W Sand                   | 30% |
| Composted Hardwood Sawdust | 20% |
| Graded Ash                 | 10% |
| Composted Pine Bark        | 10% |

TURF

Turf Underlay shall be a mix of 40% Double washed river sand, 20% composted Greenwaste, 20% nitro humus, 20% soil equivalent to Greenlife Lawn Top Dressing & Turf Underlay as produced by Australian Native Landscapes or approved equivalent. Spread 100mm of Turf Underlay as specified and finish flush with adjacent finished surface levels.

Provide a one (1)kg sample of imported topsoil mixes, if required, for approval. No imported topsoil shall be delivered to site prior to approval of the sample provided.

TOPDRESSING

Topdress material shall be as specified in AS 4419 - 1999. Topdress material shall be clean washed river sand, free from any clay lumps, clods, weeds, tree roots, sticks, organic matter, rubbish and material toxic to plant growth and the like, and shall have a neutral pH and minimal salt content (measured oven dry of 0.1%).

3.0 MULCH

APPLICATION: Place mulch to the required depth, (refer to drawings clear of plant stems, and rake to an even surface finishing 25mm below adjoining levels. Ensure mulch is watered in and tamped down during installation.

MULCH TYPE:

Pine bark: From mature trees, graded in size from 15mm to 30mm, free form wood slivers. Dark brown in colour and texture.

4.0 PLANTS

SUPPLY

The Landscape Contractor is responsible for organising the purchase and delivery of plant stock to site and checking plant stock prior to accepting delivery on site to ensure the plants supply possess the following characteristics:

Large healthy root systems, with no evidence of root curl, restriction or damage.

Vigorous, well established, free from disease and pests, of good form consistent with the species or variety.

Hardened off, not soft or forced, and suitable for planting in the natural climatic conditions prevailing at the site.

Trees must, unless required to be multi-stemmed, have a single leading shoot.

Any plants or trees that are accepted by the landscape contractor that do not meet this specification will be replaced at the contractor's expense.

Replacement: Replace damaged or failed plants with plants of the same type and size.

PLANTING

Do not plant in unsuitable weather conditions such as extremes of heat or cold, wind or rain. Before planting begins, complete cultivation, soil placement, fertilisation etc as previously specified.

Before plants are installed all pot sizes shall have their roots pruned with an appropriate, clean, sharp instrument to eliminate any root confusion occurring at edge of pot zone.

Before planting begins, thoroughly water the plants and the planting area. Keep the area and plants moist during planting. Water the plants immediately after planting, and thereafter as required to maintain growth rates free of stress.

The contractor shall give notice, of not less than 24 hours, for inspections as nominated in inspect and hold point schedule

ROOT PRUNING OF TREES

Remove tree from container and root prune 20mm on sides and bottom to ensure all circling roots have been either severed or aligned radially into the surrounding soil. Plant as per detail.

5.0 TURF

Turf shall be of even thickness free from weeds and other foreign matter, lay in stretcher pattern with joints staggered and close butted. Deliver turf on site within 24 hours of being cut, and lay within 36 hours or being cut. Prevent it from drying out between cutting and laying.

Establishment

Watering: Water as necessary to keep soil moist to a depth of 100mm.

Protection: Protect newly turfed areas against traffic until grass is established.

Making Good: Lift failed turf and relay with new turf.

Fertilising: Two weeks after laying, fertilise turf as specified.

Topdressing : When the turf is established, lightly topdress to a depth of 10mm with topdress material as specified. Rub the dressing well into the joints and correct any unevenness of surface

Mowing: When the turf is established, mow at regular intervals to maintain an average height of 50mm.

TURF TYPE: Kikuyu

Recommended Supplier: A registered Turf grower to be approved by the Landscape Architect.

6.0 FERTILISER

MASS PLANTING AREAS

Type: Nutricote Standard Black 270 Day (16: 4: 8.3)

Installation: Evenly distribute 5g per litre (rootball size) of fertiliser onto backfill area around rootball prior to placing mulch.

TREE PLANTING

Type: Nutricote Standard Brown 360 Day blend (16: 4: 8.3)

Installation: Distribute 5g per litre (rootball size)of fertiliser into backfill around rootball. Apply in 3 evenly spread layers as hole is filled. First layer is to be half way up the rootball, second layer 3/4 up the rootball and third layer 50-100mm from the soil finished surface level. This application ensures that the nutrients leeches evenly downwards into the soil profile and encourages outward root system growth.

TURF

Kikuyu: Yates Dynamic Lifter Turf Lifter (10: 4: 6)

Installation: Evenly spread and mix 50g of fertiliser per m2 into topsoil prior to placing turf.

7.0 STAKING AND TYING

Stakes shall be straight plantation grown hardwood, free from knots and twists, pointed at one end and sized according to size of plants to be staked.

a. 5-15 litre size tree 1x(1200x25x25mm)

b. 35-75 litre size tree 2x(1500x38x38mm)

c. 100-greater than 200 litre tree 3x(1800x50x50mm)

Ties shall be 50mm wide hessian webbing or approved equivalent nailed or stapled to stake. Drive stakes a minimum one third of their length, avoiding damage to the root system, on the windward side of the plant.

8.0 ROOT CONTROL BARRIER

TYPE: Root Stop Root Barrier

PRODUCT CODE: RS600

LOCATION: to all trees in pavement

SIZE: 600mm deep roll

SUPPLIER: Arbor Green (Tel: 1300 760 642)

INSTALLATION: The top of root control barrier to be located 150mm closer to the street/tree trunk than the base of the root control barrier. The angling of the root control barrier encourages root growth in a downward direction.

9.0 FENCING

Refer to material palette and schedules

10.0 GATE

Refer to material palette and schedules

11.0 IRRIGATION

Irrigation is to comply with Council Conditions of consent and water authorities. Water is to be sourced from the under ground water collection tanks as detailed by the engineers. Drip irrigation is to be supplied to all trees in paving and mass planting areas.

All grassed playing fields are to be irrigated with a pop up sprinkler system.

A specialist irrigation sub contractor is to prepare workshop drawings for approval prior to works commencing.

Maintenance Program

Maintenance shall mean the care and maintenance of the landscape works by accepted horticultural practice as rectifying any defects that become apparent in the landscape works under normal use. This shall include, but shall not be limited to, watering, mowing, fertilising, reseeding, returfing, weeding, pest and disease control, staking and tying, replanting and plant replacement, cultivation, pruning, aerating, renovating, topdressing, maintaining the site in a neat and tidy condition as follows:

1.0 GENERAL

The Landscape Contractor shall maintain the landscape works for the term of the maintenance (or plant establishment) period to the satisfaction of the Landscape Architect and Client. The Landscape Contractor shall attend to the site on a weekly basis. The maintenance period shall commence at practical completion and continue for a period of fifty two (52) weeks.

2.0 WATERING

Grass and trees shall be watered regularly so as to ensure continuous healthy growth. Street trees and larger plant stock are to be watered through the top of the rootball to ensure a thorough soaking of the plant rootball. Watering of street trees shall be carried out on a weekly basis throughout the maintenance period regardless of rainfall.

3.0 RUBBISH REMOVAL

During the term of the maintenance period the Landscape Contractor shall remove rubbish that may occur and reoccur throughout the maintenance period. This work shall be carried out regularly so that at weekly intervals the area may be observed in a completely clean and tidy condition.

4.0 REPLACEMENTS

The Landscape Contractor shall replace all plants that are missing, unhealthy or dead at the Landscape Contractor's cost. Replacements shall be of the same size, quality and species as the plant that has failed unless otherwise directed by the Landscape Architect. Replacements shall be made on a continuing basis not exceeding two (2) weeks after the plant has died or is seen to be missing. The landscape contractor is to report any evidence of theft or vandalism to the Landscape Architect within one day of them occurring.

5.0 STAKES AND TIES

The Landscape Contractor shall replace or adjust plant stakes and tree guards as necessary or as directed by the Landscape Architect. Remove stakes and ties at the end of the maintenance period if so directed.

6.0 PRUNING

Trees and shrubs shall be pruned as directed by the Landscape Architect. Pruning will be directed at the maintenance of the dense foliage or miscellaneous pruning beneficial to the condition of the plants. Any damaged growth shall be pruned. All pruned material shall be removed from the site.

7.0 MULCHED SURFACES

All mulched surfaces shall be maintained in a clean and tidy condition and be reinstated if necessary to ensure that a depth of 75mm is maintained. Ensure mulch is kept clear of plant stems at all times.

8.0 PEST AND DISEASE CONTROL

The Landscape Contractor shall spray against insect and fungus infestation with all spraying to be carried out in accordance with the manufacturer's directions. Report all instances of pests and diseases (immediately that they are detected) to the Landscape Architect prior to spraying.

9.0 GRASS AND TURF AREAS

The Landscape Contractor shall maintain all grass and turf areas by watering, weeding, reseeding, rolling, mowing, trimming or other operations as necessary.

Apply lawn fertiliser as specified in fertilisers at the completion of the first and the last mowing, and at times as necessary to maintain healthy grass cover. Carry out last mowing and fertilisation not less than seven (7) days before the end of the maintenance period. Remove grass clippings from site. Grass and turf areas shall be sprayed with approved selective herbicide against broad leaved weeds as required by the Landscape Architect and in accordance with the manufacturer's directions.

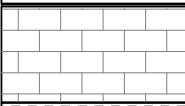
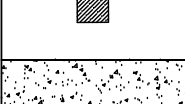
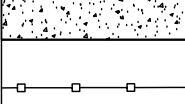
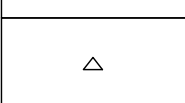
No fertiliser is to be used on turf areas.

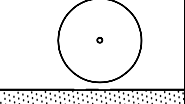
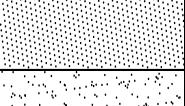
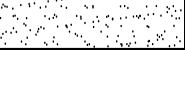
10.0 WEED ERADICATION

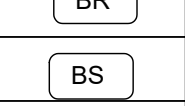
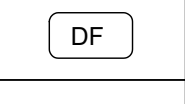
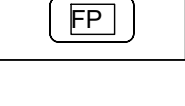
Eradicate weeds by environmentally acceptable methods using a non-residual glyphosate herbicide (eg: 'Roundup') in any of its registered formulae, at the recommended maximum rate. Regularly remove by hand, weed growth that may occur or recur throughout grassed, planted and mulched areas. Remove weed growth from an area 1000mm diameter around the base of trees in grassed areas. Continue eradication throughout the course of the works and during the maintenance period.

11.0 SOIL SUBSIDENCE

Any soil subsidence or erosion which may occur after the soil filling and preparation operations shall be made good by the Landscape Contractor at no cost to the client.

| Legend & Schedule - Hardworks                                                       |                 |                                             |                         |                              |
|-------------------------------------------------------------------------------------|-----------------|---------------------------------------------|-------------------------|------------------------------|
| Code                                                                                | Type            | Finish                                      | Colour / Size           | Notes                        |
|  | Brick Paving    | Non slip                                    | Sandstone               | Upper channel interpretation |
|  | Hard court      | Painted acrylic with linemarkings           | TBC                     |                              |
|  | Tree in Paving  | Resin bond stone                            | Sandstone               |                              |
|  | Insitu concrete | Broom finish                                | Coloured oxide TBC      |                              |
|  | Boundary Fence  | Powdercoated steel pallsade fence           | 2100mm high colour TBC  |                              |
|  | Gate Type 1     | sliding gate to match Fence Type 1          | 2100mm high by 6m wide  |                              |
|  | Gate Type 2     | Pedestrain swing gate to match Fence Type 1 | 2100mm high 1200mm wide |                              |

| Legend & Schedule - Softworks                                                       |                   |                                     |                  |                        |
|-------------------------------------------------------------------------------------|-------------------|-------------------------------------|------------------|------------------------|
| Code                                                                                | Type              | Finish                              | Colour / Size    | Notes                  |
|  | New trees         | Mulch                               | Refer Plant list | Refer to Specification |
|  | Mass Planting Bed | Garden Bed on grade with Bark Mulch |                  | Refer to Specification |
|  | Turf              | Kikuyu                              |                  | Refer to Specification |

| Legend & Schedule - Equipment                                                         |                          |                            |          |                                         |
|---------------------------------------------------------------------------------------|--------------------------|----------------------------|----------|-----------------------------------------|
| Code                                                                                  | Description              | Supplier                   | Quantity | Notes                                   |
|    | Basket Ball Hoop         | Moduplay                   | 2        | Install to manufacturer's specification |
|    | Bike Rack                | TBC                        | 30       | Install to manufacturer's specification |
|    | Bench Seat (Mall Curved) | Street Furniture Australia | 10       | Install to manufacturer's specification |
|   | Drinking fountain        | TBC                        | 3        | Install to manufacturer's specification |
|  | Flag pole                | TBC                        | 3        | Install to manufacturer's specification |



CONCRETE PAVING



FENCING



DRY CREEK BED



BENCH SEAT



HARDCOURT



DRINKING FOUNTAIN



BASKETBALL HOOP

| AMMENDMENTS |    |          |                       | DESCRIPTION |
|-------------|----|----------|-----------------------|-------------|
| REV         | BY | DATE     |                       |             |
| A           | IB | 30.08.19 | 100% SCHEMATIC DESIGN |             |
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Vince Padavoli NSW reg No.5045

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PERUMAL PEDAVOLI ARCHITECTS

EAST LEPPINGTON PS  
NEW HIGH QUALITY CLASSROOMS

DRAWING NAME  
LANDSCAPE: SPECIFICATION

PROJECT NORTH

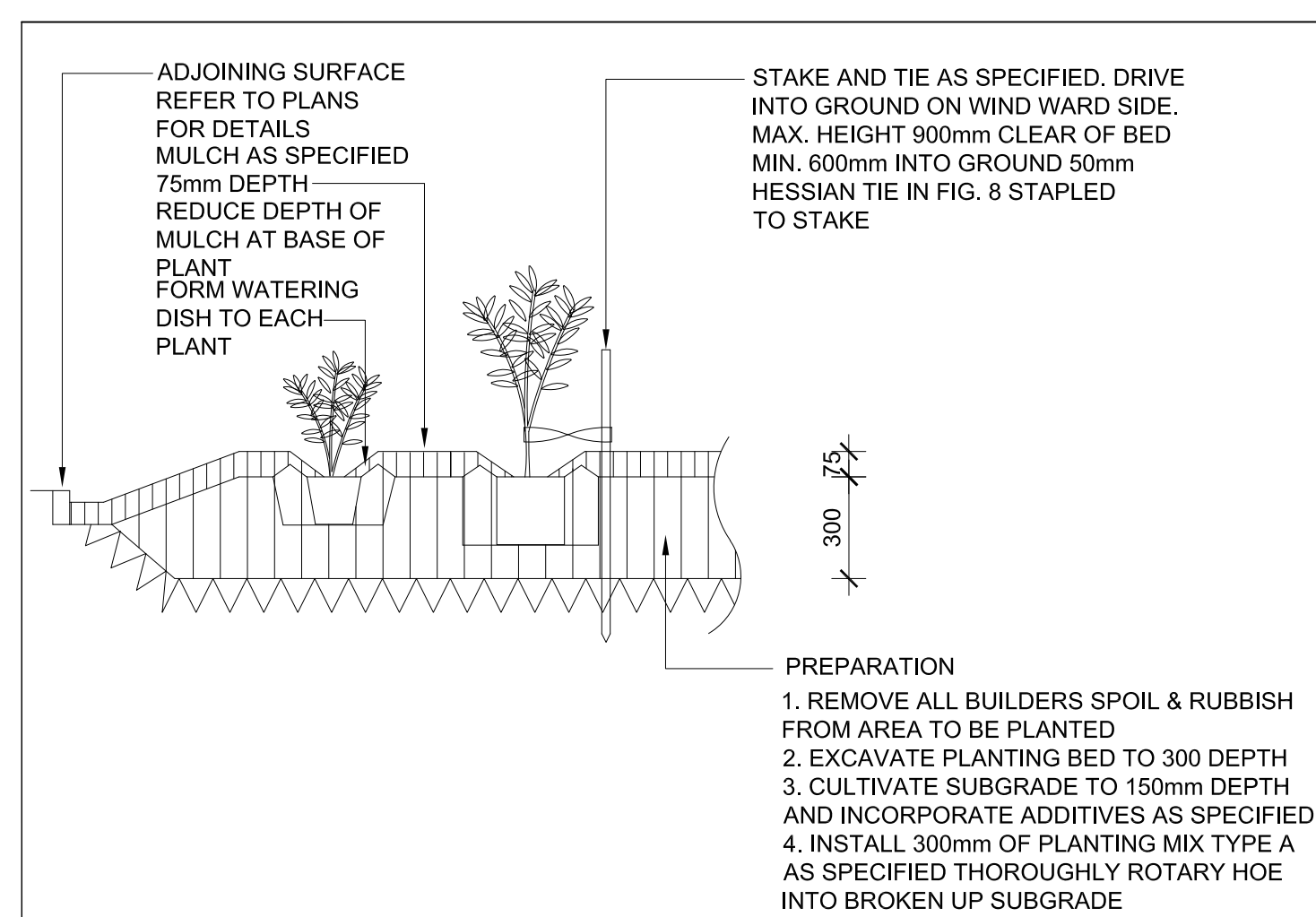
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DRAWN: BH, CHECKED: IB, VERIFIED: IB, DATE: 30 AUGUST 2019

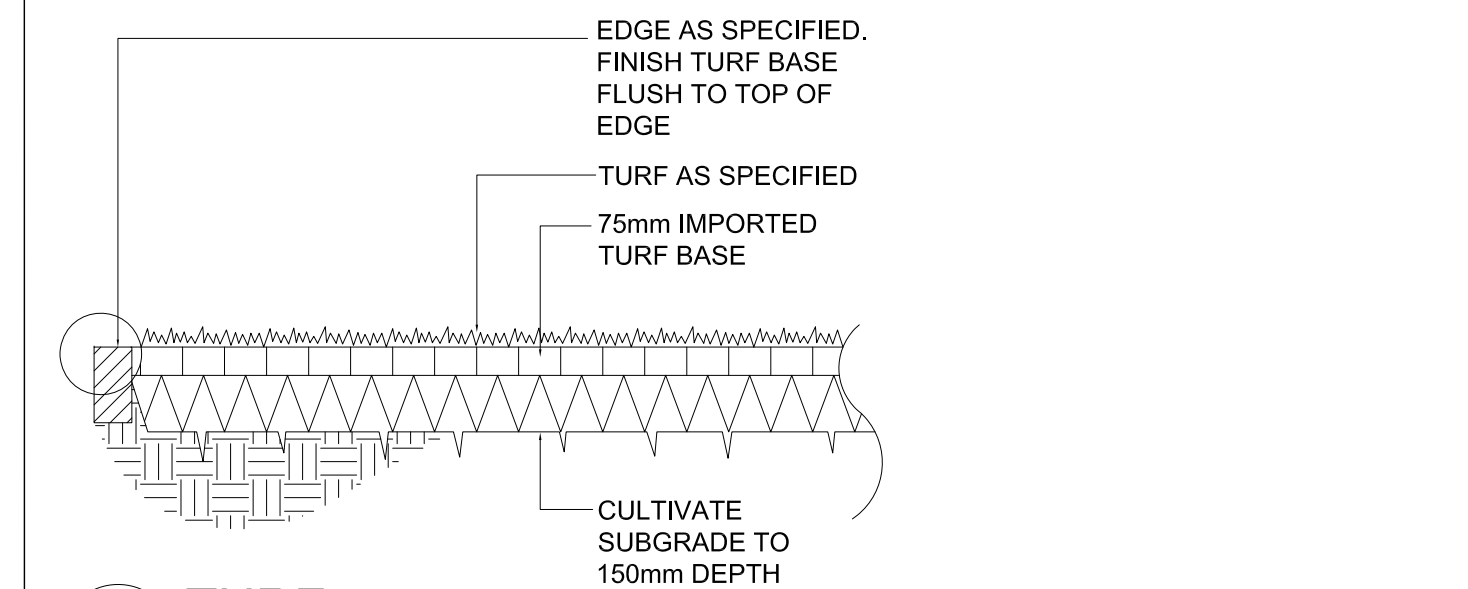
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PROJECT CODE: NHQC2 - LP - LA - DWG - L500

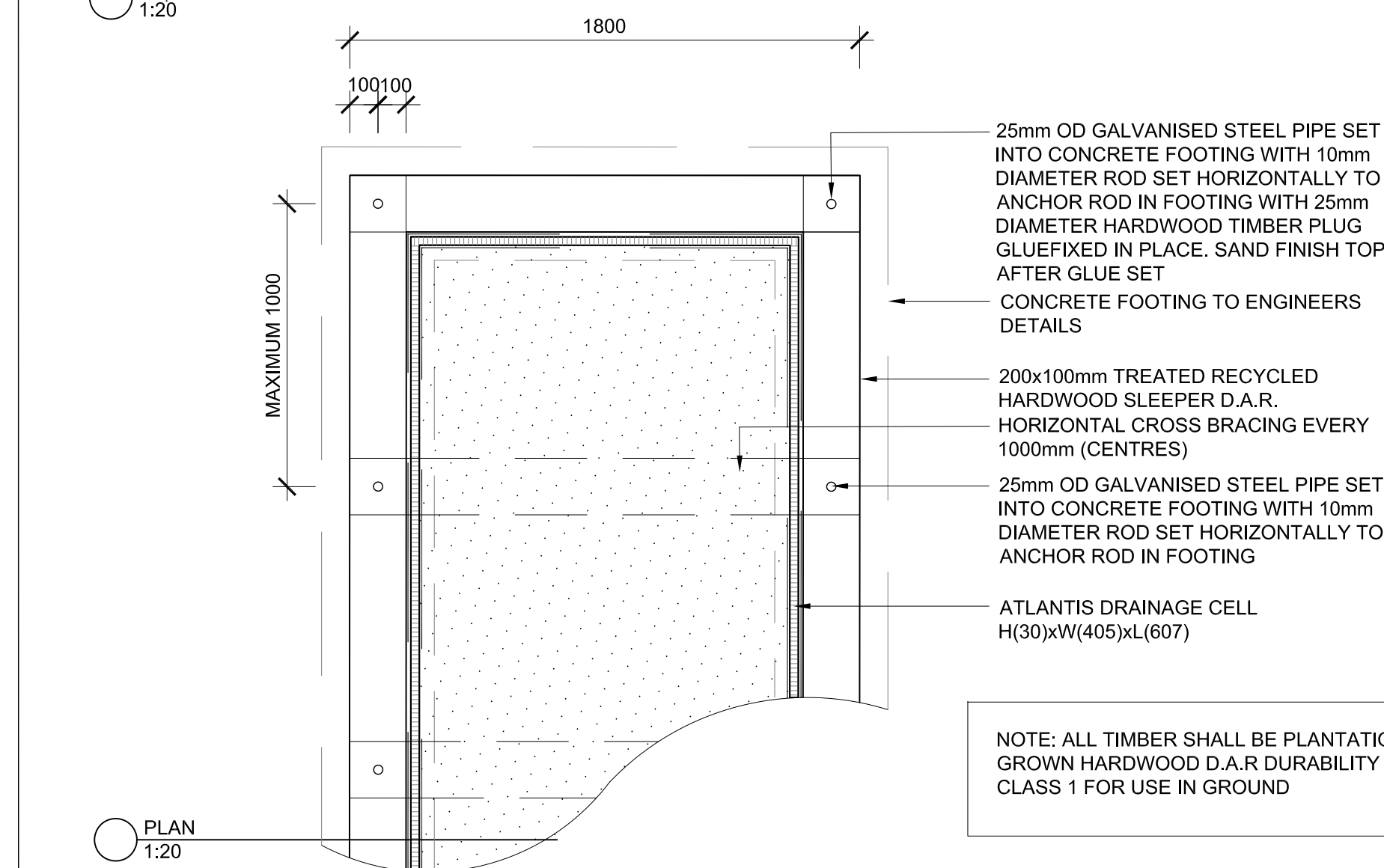
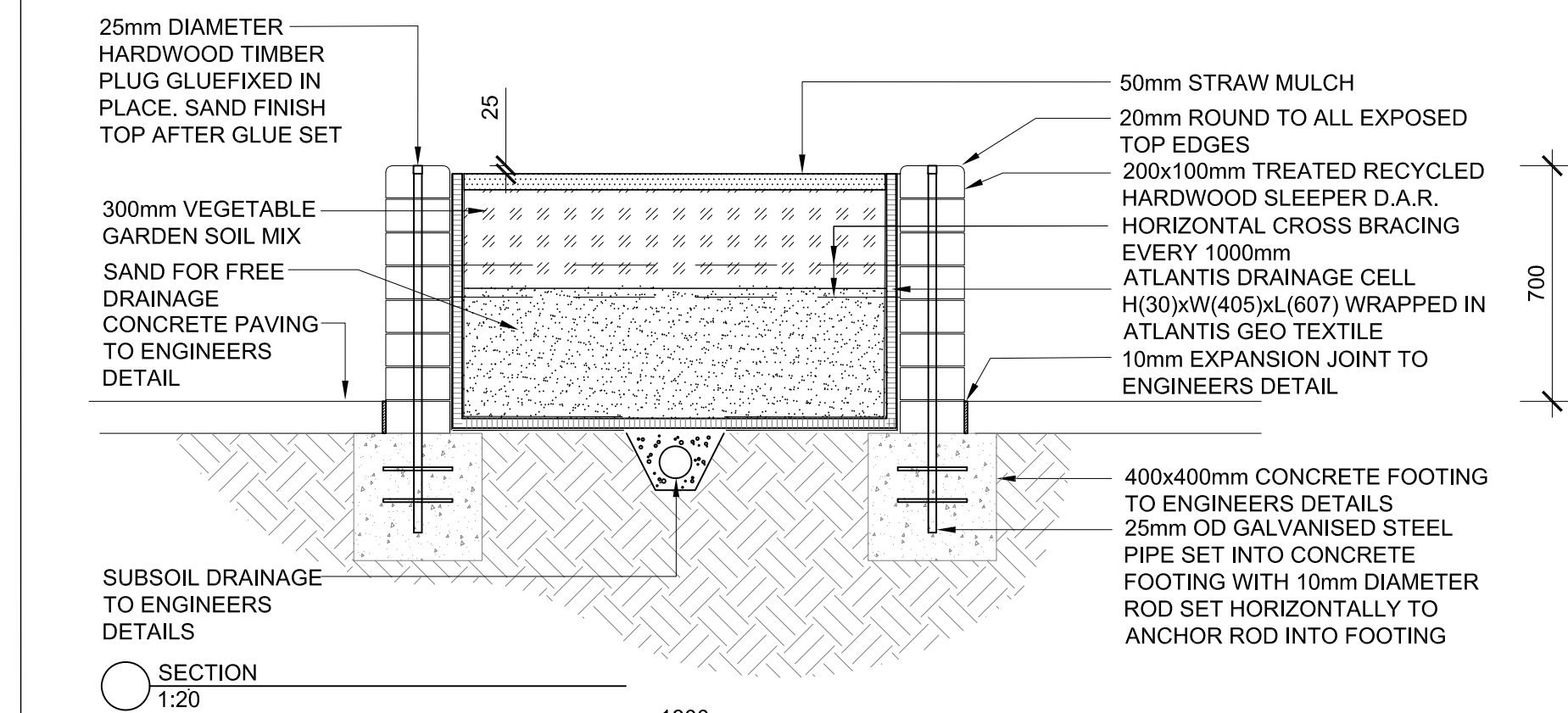
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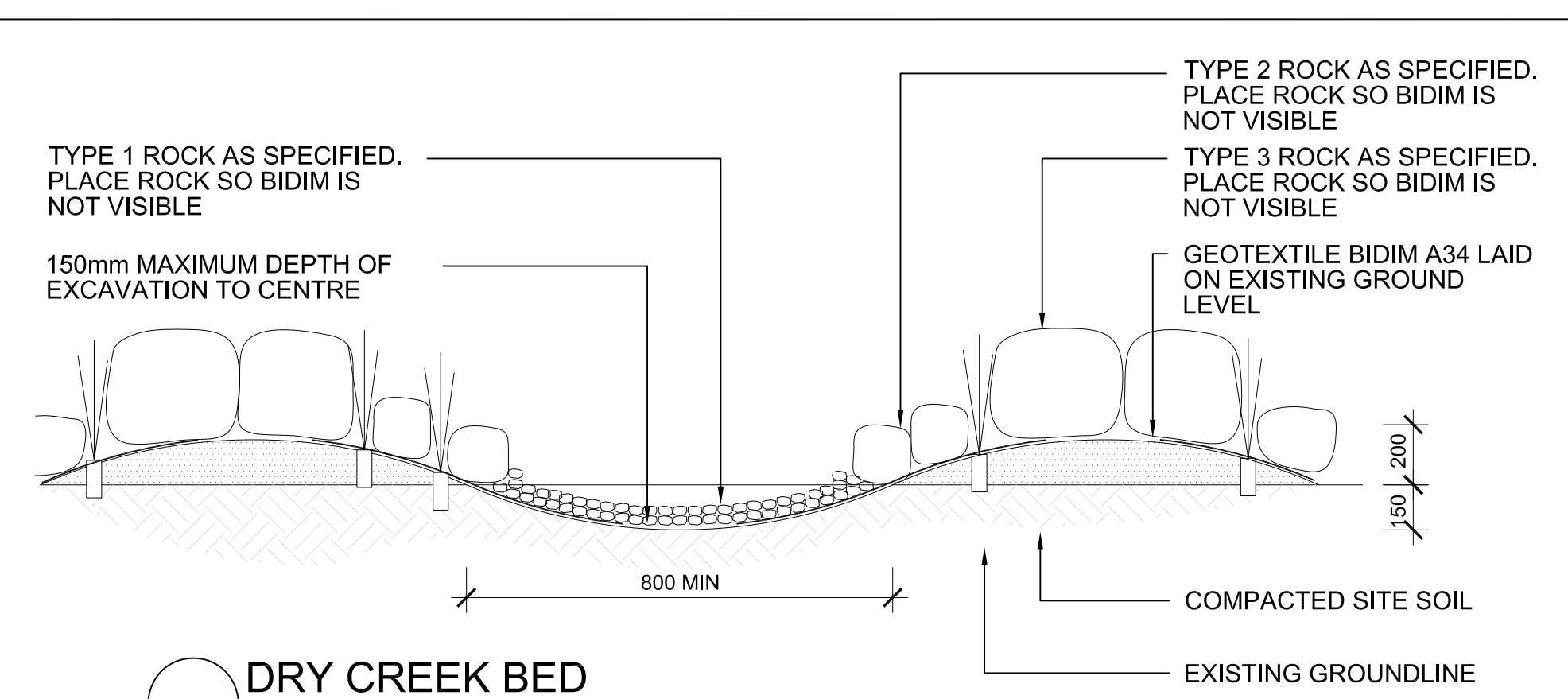
MASS PLANTING BED  
TYPICAL SECTION 1:20



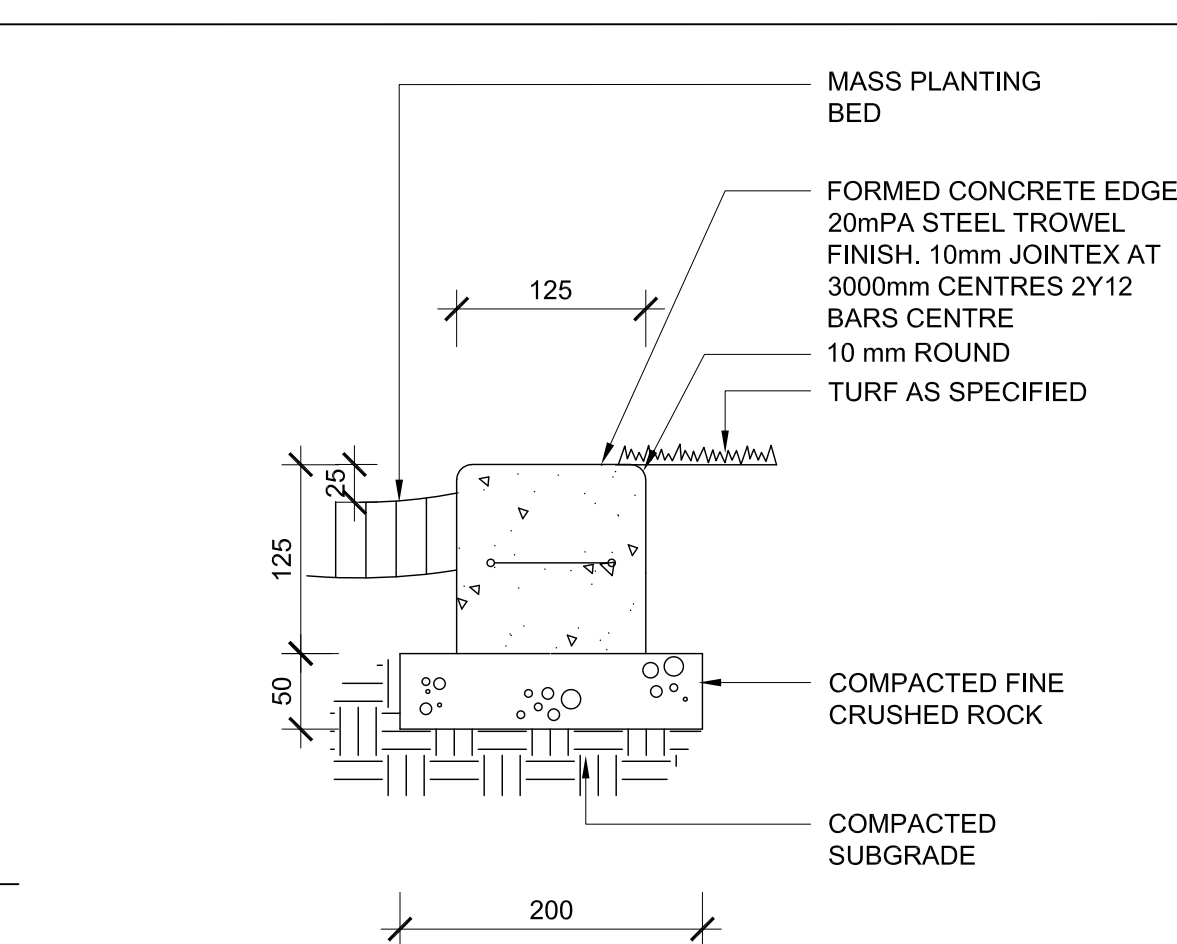
TURF  
SECTION 1:20



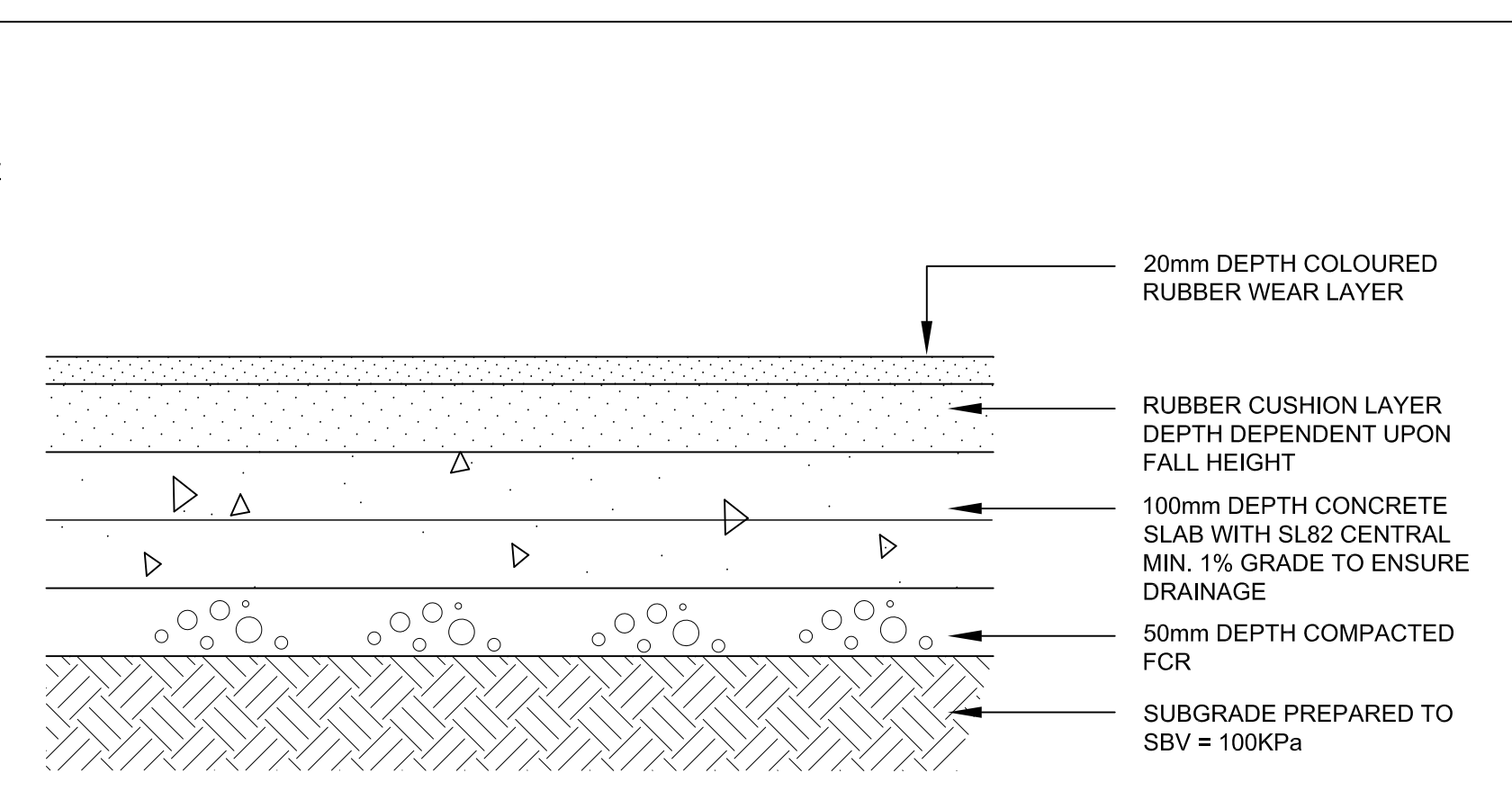
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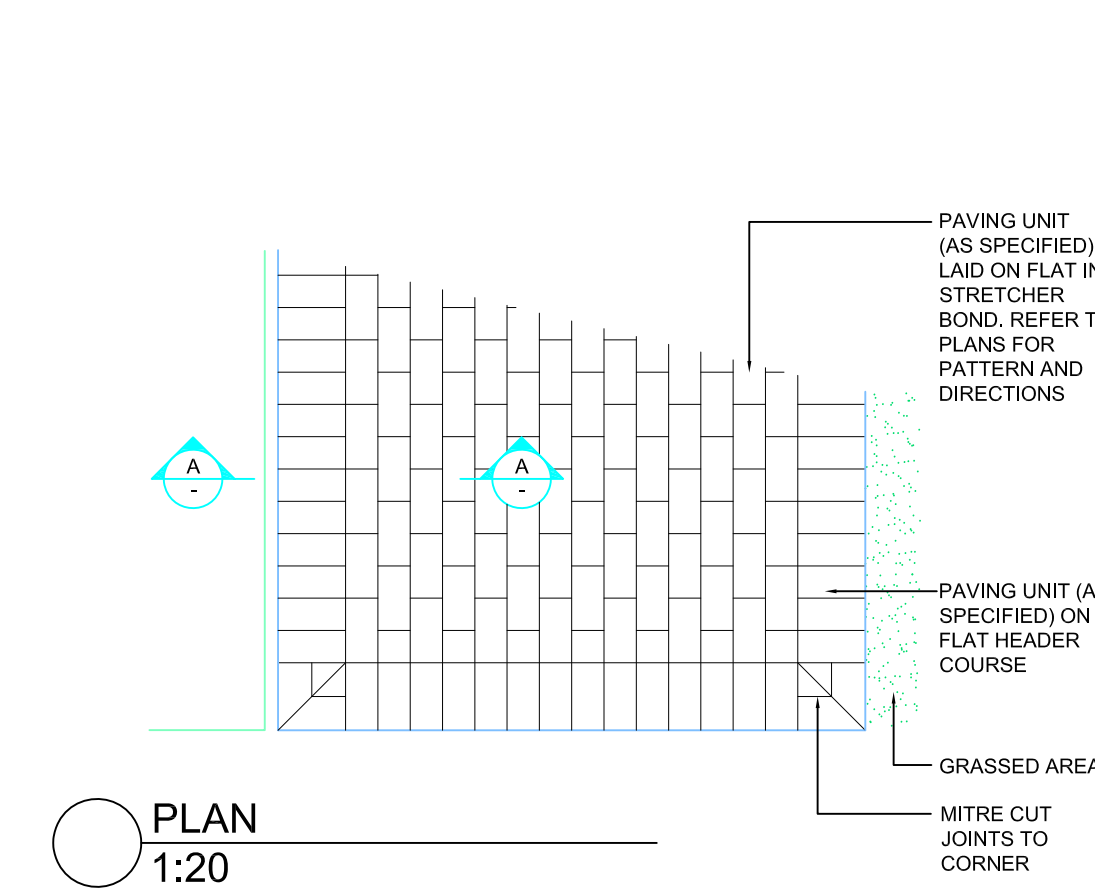
DRY CREEK BED  
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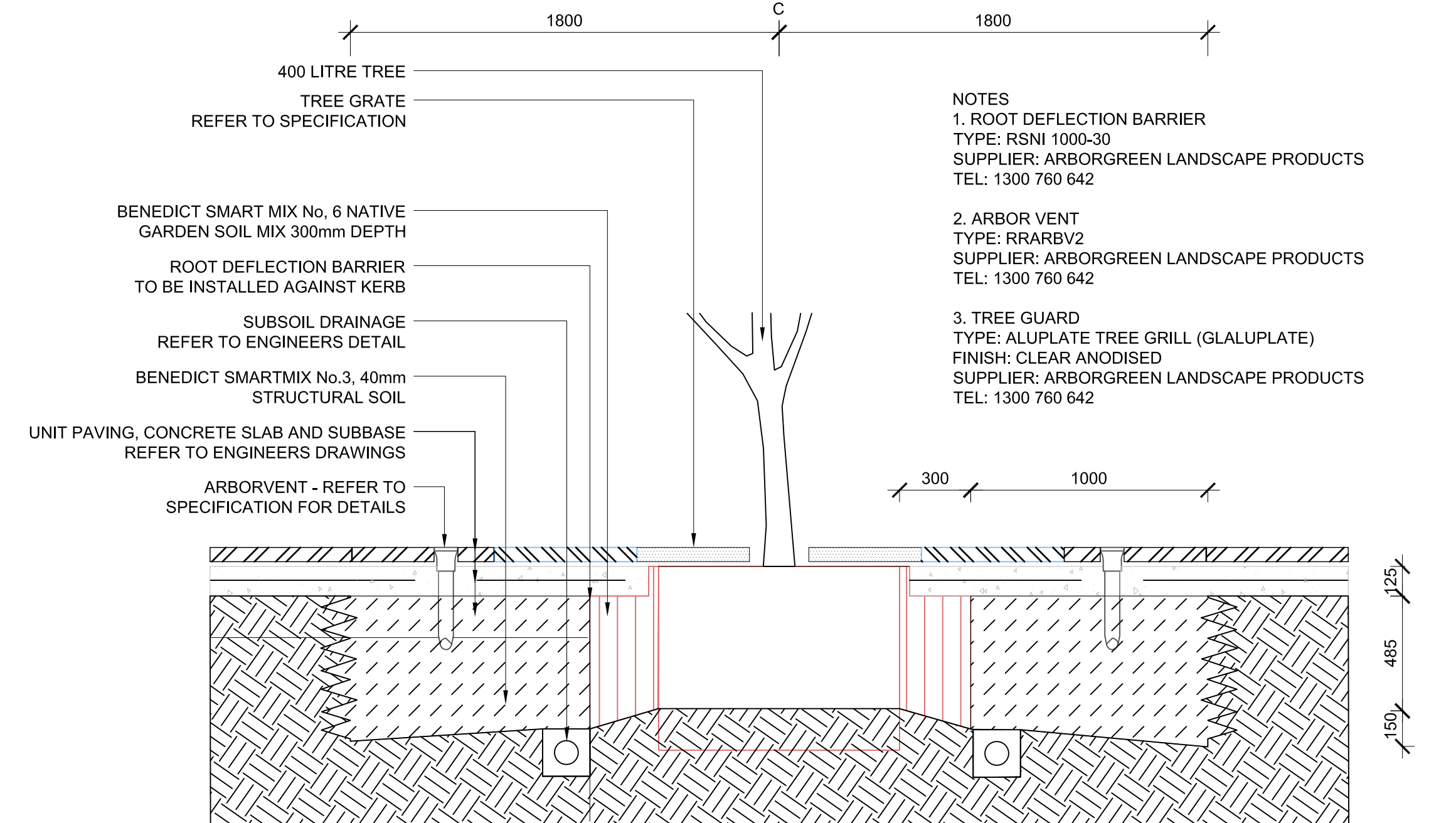
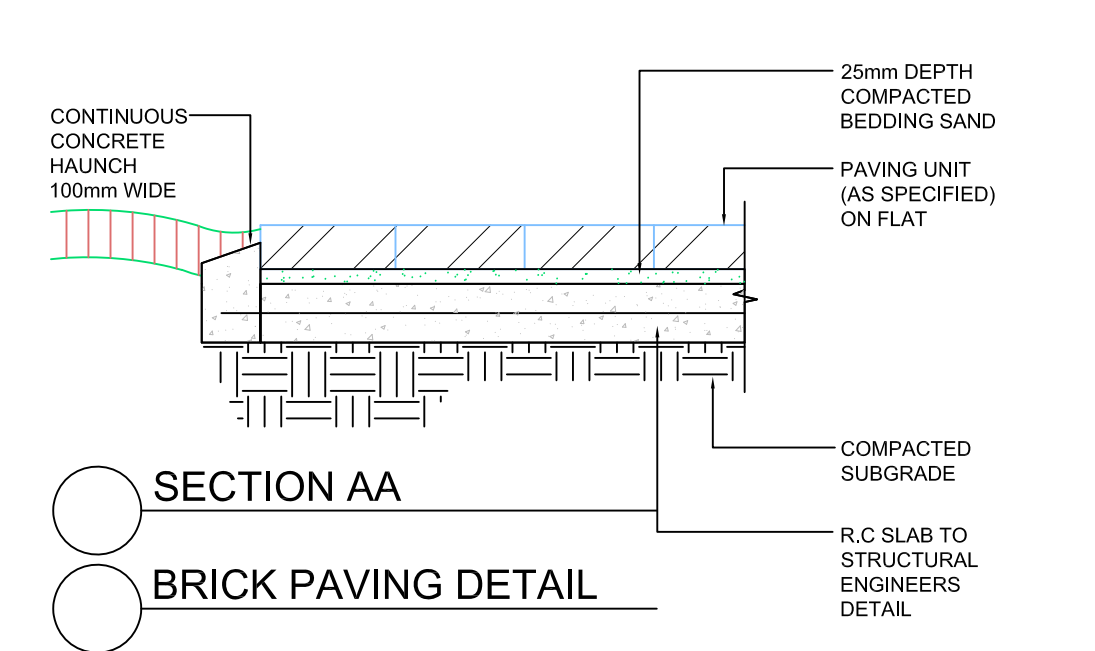
CONCRETE EDGE  
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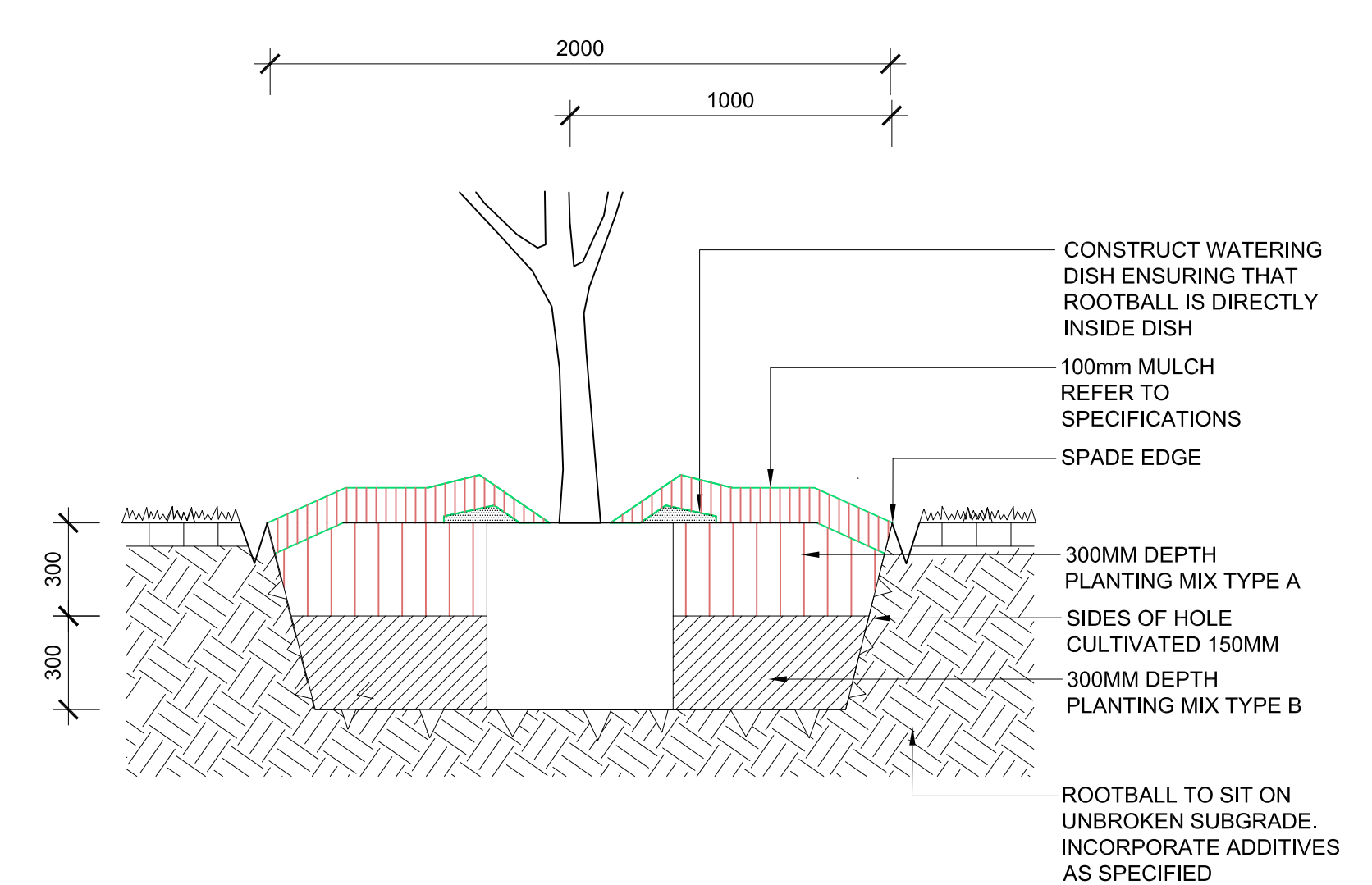
WETPOUR SOFTFALL - ON CONCRETE  
TYPICAL SECTION 1:5



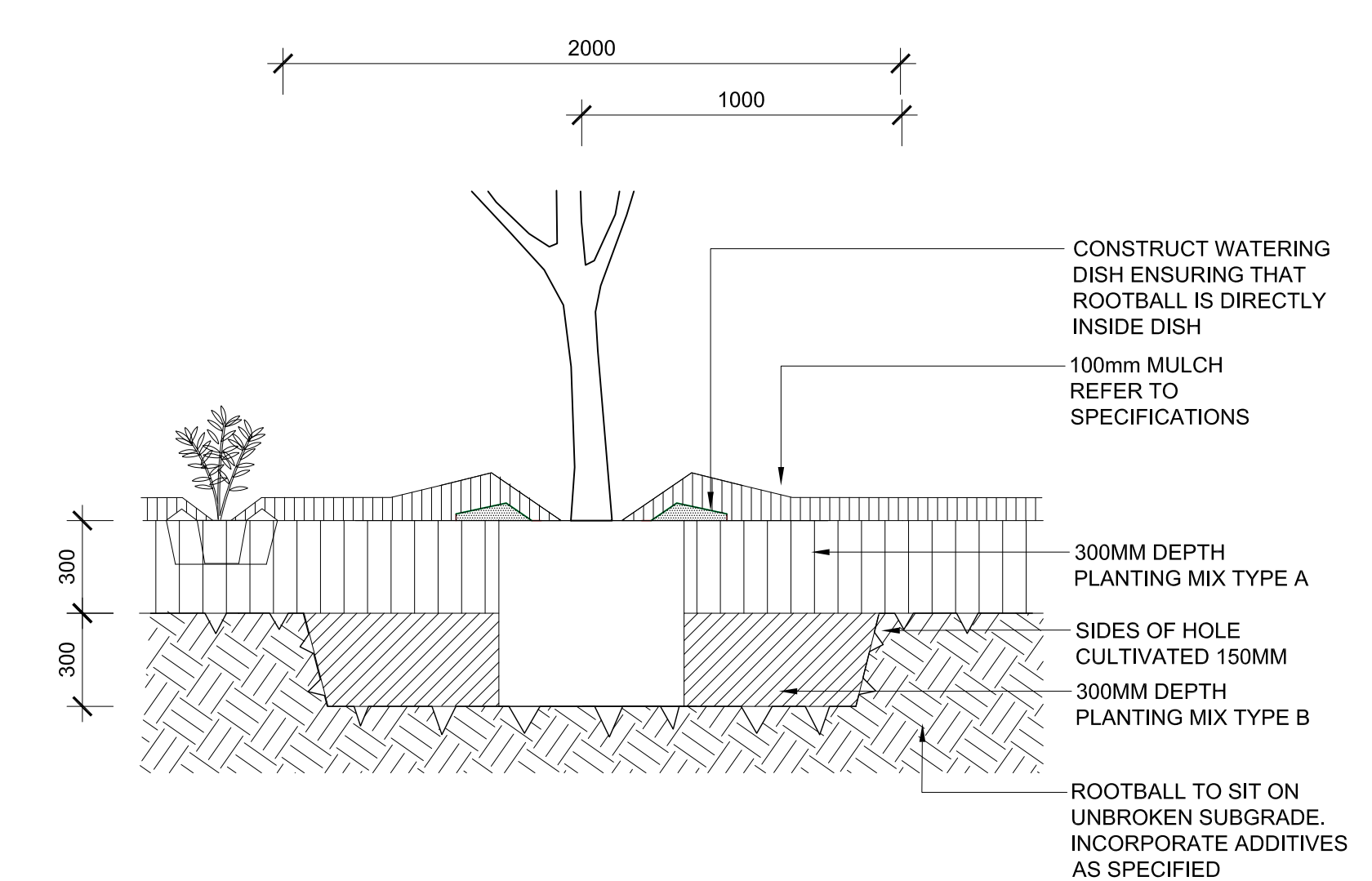
PLAN  
1:20



SEMI MATURE TREE IN PAVING  
1:20



SEMI MATURE TREE PLANTING IN GRASS  
TYPICAL SECTION 1:20



SEMI MATURE TREE PLANTING IN MASS PLANTING  
TYPICAL SECTION 1:20

| AMMENDMENTS |    |          |                       | DESCRIPTION |
|-------------|----|----------|-----------------------|-------------|
| REV         | BY | DATE     |                       |             |
| A           | IB | 30.08.19 | 100% SCHEMATIC DESIGN |             |
|             |    |          |                       |             |
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Nominated Architect:  
Vince Pedavoli NSW reg No.5045

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**PERUMAL PEDAVOLI**

ARCHITECTS

EAST LEPPINGTON PS  
NEW HIGH QUALITY CLASSROOMS

DRAWING NAME  
LANDSCAPE: CONSTRUCTION DETAILS

PROJECT NORTH

0 5 10 20 30 40 50 m

|       |         |          |                |
|-------|---------|----------|----------------|
| DRAWN | CHECKED | VERIFIED | DATE           |
| BH    | IB      | IB       | 30 AUGUST 2019 |

DRAWING NUMBER: L600 As shown REVISION

PROJECT CODE SCH. REF. DISC. TYPE SERIES#

NHQC2 - LP - LA -DWG -L600

A