

# Draft Westleigh Park Master Plan Document



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## 1.0 Introduction

Council has sought to develop a sustainable plan for community use of the site known as Westleigh Park and believes that it potentially plays a key role in recreational provision for the district area including provisions for formal sports, passive recreation (picnics, walking, playground), mountain biking and ancillary facilities (roads, carparks, building, shared paths and water quality treatment).

The site was formerly owned by Sydney Water and adjoins the Sydney Water Thornleigh Reservoir to the south and bushland to the north. Quarter Sessions Road runs along the western frontage of the park with adjoining residential properties backing on to the site from Kooringal Avenue to the east. Some of the bushland within the site is considered environmentally sensitive including dedicated bio banking sites and endangered ecological communities.

The development of the draft Master Plan has involved a multidisciplinary team including specialist inputs in the following areas:

Taylor Thompson Whitting (TTW)

Civil, Traffic and Transportation engineering

Environmental Partnerships (NSW) Pty Ltd

Master plan concepts

Coffey Partners

Remediation and Environmental Management

Eco Logical Australia

**Environmental Assessment** 

Trailscapes Typ Ltd

**Mountain Bike Trail Assessment** 

Wannangini Pty Ltd

**Aboriginal Heritage** 

This report provides a summary of the study area and outlines the contents of a Draft Master Plan for Westleigh Park.

# 2.0 Project Objectives

The Draft Master Plan was required to provide enough detail for an understanding of:

- Consideration of the following potential facilities:
  - i. Multi-use sporting fields for various organised sports including a synthetic grass sportsground and amenities building(s).
  - ii. Provision of a playground(s) and passive recreation including bushwalking trails, mountain bike tracks, pedestrian and cycle shared paths with links to nearby Ruddock Park.
  - Car parking areas to service park and all recreation facilities.
  - iv. Roads for access and circulation, and
  - v. A link road between Quarter Sessions Road and Sefton Road.
- Bulk earthworks required to achieve a site that will provide two large platforms approximately 190m x 160m that could facilitate a variety of sporting codes along with a third platform suitable for athletics.
- Understanding of any cut and fill requirements, embankments or retaining walls, and the extent of any impact on adjacent bushland areas that could be expected in achieving the sports field outcomes.
- The various potential methods of dealing with contamination (waste) on the site along with clear direction on the most cost-effective solutions for remediation and development.
- Safe vehicular access to the site and provision of utility services.



# 3.0 Site Description

Westleigh Park is located at 62 Quarter Sessions Road, Westleigh on Lot 101 DP 1217395. The land is owned by Hornsby Shire Council and is currently zoned (R2) Low Density Residential and Environmental Management (E3) in the Hornsby Local Environmental Plan (LEP) 2013, with adjoining lands zoned as (R2) Low Density Residential or (RE1) Public Recreation. The Dog Pound Creek land, located to the north of the Westleigh Park site, is owned by Hornsby Council and is mostly bushland zoned (RE1) Public Recreation. Dog Pound Creek Biobanking cannot be used or impacted upon.

The study area is approximately 46 hectares (with about 36 Ha. in Westleigh Park and around 10 Ha. in the adjoining Dog Pound Creek bushland). In Westleigh Park around 10 hectares is currently cleared land with the remainder being bushland (referred to as 'Westleigh Park Bushland'). The Westleigh Park land was formerly owned by Sydney Water and adjoins the Sydney Water Thornleigh Reservoir to the south and is bordered by bushland to the north. Quarter Sessions Road runs along the western frontage of the park with some adjoining residential properties backing on to the site from Kooringal Avenue to the east. Areas of bushland within

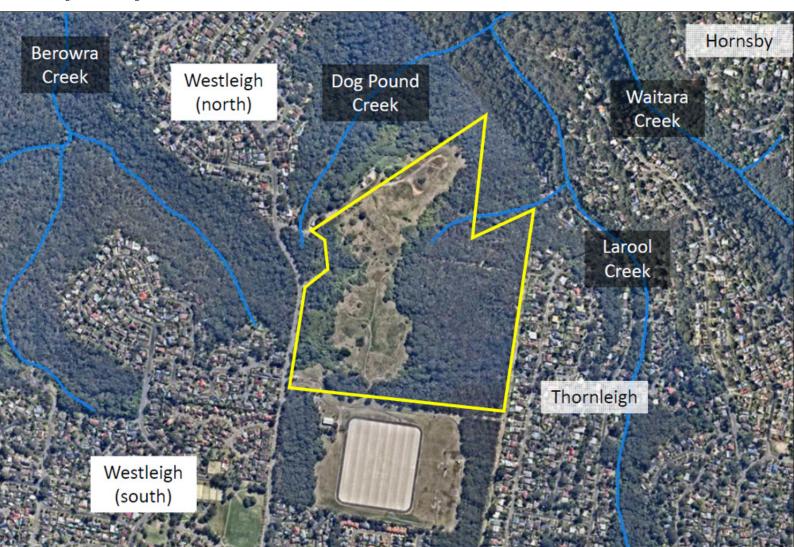
the site are mapped as 'endangered' and 'critically endangered' as well as threatened species being present. These areas need to be retained and all impacts are to be avoided or minimised in this area.

#### 3.1 Current Site Conditions and Use

The cleared area on the site is predominately tufted grasses and un-maintained Kikuyu with some dirt racks and weeds and is not currently used for any purpose other than for informal recreation such as dog walking and access for established unsanctioned mountain bike trails connecting with forest trails.

A Rural Fire Services (RFS) building is located along the north of the cleared land. Westleigh Park Bushland contains areas of mapped CEEC and EECs and includes an extensive network of unsanctioned mountain bike tracks within it. The adjacent Dog Pound Creek site is mostly bushland with some fire trails and areas of weed growth. The majority of Dog Pound Creek site is affected by a BioBanking agreement and cannot be impacted by the proposal.

Figure 1. Westleigh Park Site below







Westleigh Park, including the Bushland areas, does containareas of contamination (asbestos, PFAS and others) on the surface and within the site fill and much of this material is to be treated as solid waste including remnant putrescible material. A detailed PFAS contamination assessment has been undertaken and the NSW Government has undertaken to provide remediation of all PFAS affected areas.

#### **Topography**

The site lies at approximately 140m Australian Height Datum (AHD) on an approximately north trending ridgeline. Land slopes away from the centre of the site to the east and west, while the northern areas slope to the northwest, north and northeast towards gullies. Falls across the existing landform range between 1:20–1:30 which is significantly steeper than a playing field platform (generally 1:100).

#### **Drainage**

The site drains to the east and north west to the Dog Pound Creek catchment. Through the centre of the site (in the assumed area of the former quarrying borrow pit) is a zone of impeded drainage.

#### Geology

Most of the site is assumed to be underlain by Ashfield Shale along the top of the central ridgeline, with the northwest and northeast areas underlain by Hawkesbury Sandstone. Information provided by Sydney Water pertaining to the borrow pit in the north of the site and construction of the reservoir south of the site, suggested that the depth of fill/soil overlying bedrock may vary from up to approximately 3m below ground level near the southern site boundary, to less than 1m below ground level towards the northern site boundary.

#### Landfill

Between 40–50% of the cleared portion of the site has a landfill depth of one metre or lower with up to 2–4m depth in zones along the south western and eastern boundaries.

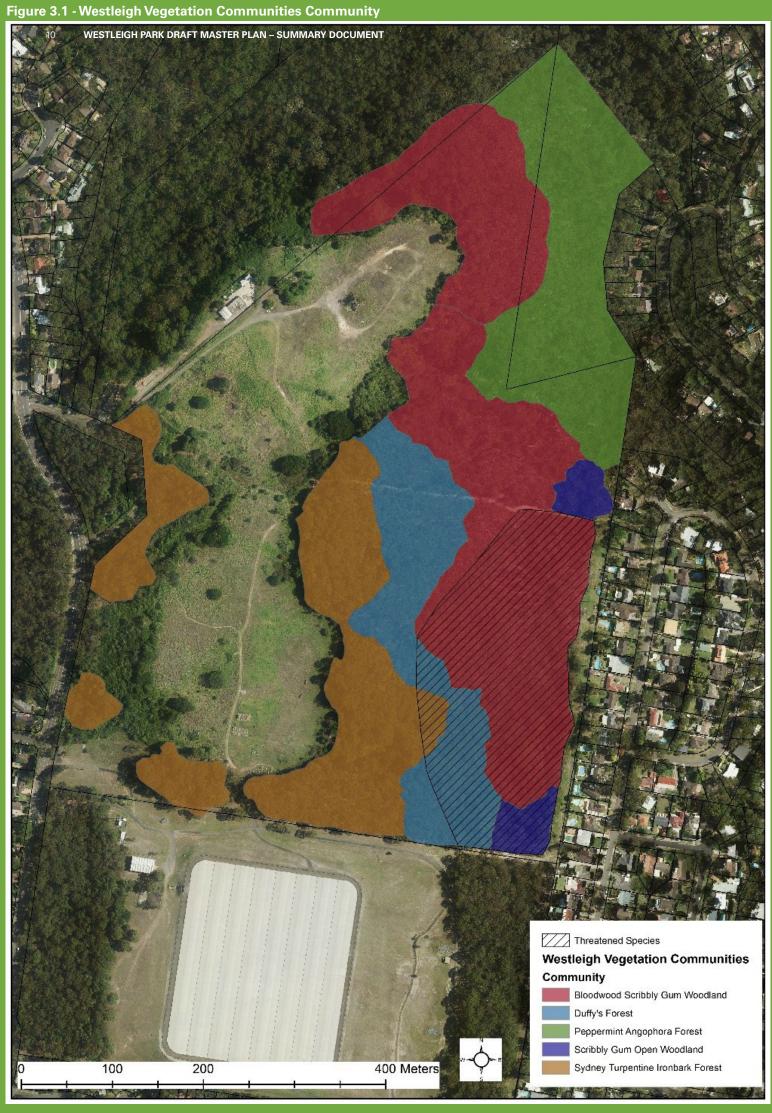
A borrow pit was used as a source of rock during construction of the Thornleigh Reservoir south of the site. Approximately 23,700 m³ was won from a borrow pit. Based on an approximate area of 11,690 m² the approximate depth of the borrow pit has been estimated to be 2m.

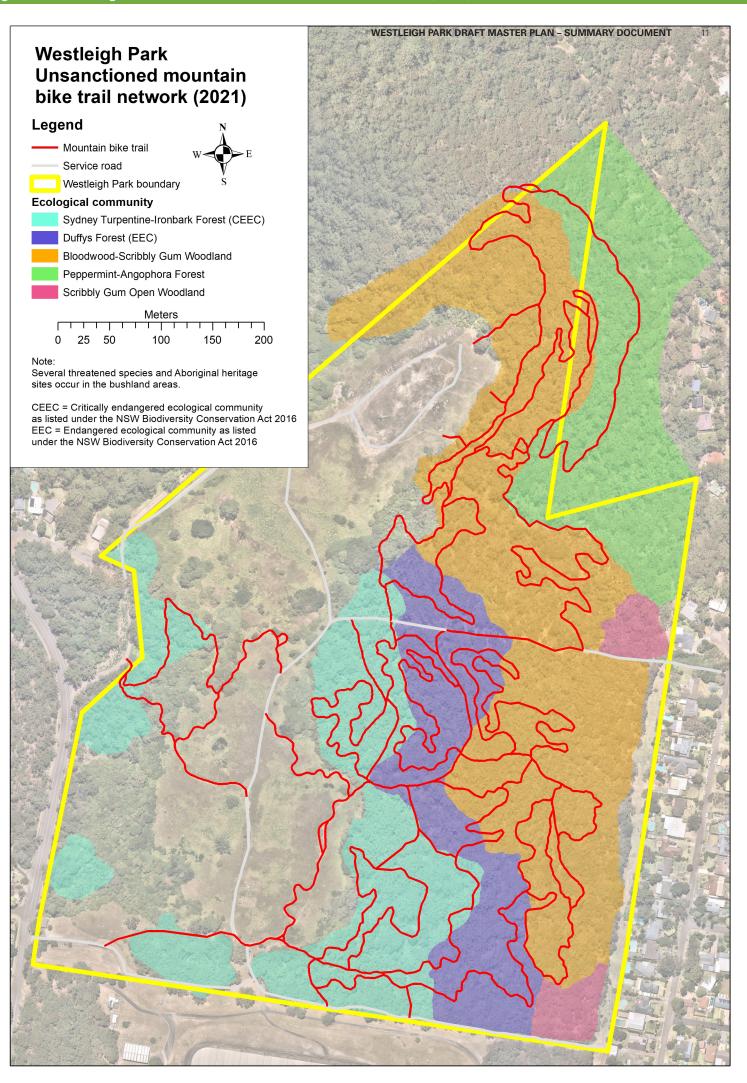
#### Vegetation

Vegetation mapping on the site is reflected in Figure 3.1 and identifies that Threatened Flora - *Darwinia biflora* Threatened Species Conservation (TSC) Act (NSW) and Environment Protection and Biodiversity Conservation (EPBC) Act (Commonwealth) and *Tetratheca glandulosa* (TSC) were all observed on-site.

Ecological communities on the site include Sydney Turpentine Ironbark Forest (STIF), listed as Critically Endangered under the EPBC Act and Duffys Forest, listed as an Endangered Ecological Community under the TSC Act.

Three other vegetation community are present on-site. Over 240 plant species, including eleven species of Orchids, have also been recorded on-site. There are unsanctioned mountain bike trails that pass through the above areas (Figure 3.2).







# 4.0 Draft Master plan

The Draft Master Plan for Westleigh Park is shown in Figure 4.1 and 4.2. The plan seeks to facilitate the development of the park; to conserve important bushland and habitat; address district recreational needs; and remediate the site in a suitable manner.

The key aspects of the masterplan include:

#### 4.1 Circulation and Parking

The circulation and access network within and to the site is referred to as Figure 4.3.

#### New roundabout at Warrigal Road north

This intersection is proposed to be converted into a roundabout to allow all traffic movements and better manage traffic volumes. The central island will be mountable to allow for bus movements into Warrigal Drive. Consideration was also given to the requirement for firetrucks to access the Westleigh Rural Fire Brigade facility. As Quarter Sessions Road is identified as an on-road bicycle route, modifications are proposed to include a shared path adjacent to the roundabout to allow for safe movement of bicycles through the roundabout.

Associated kerb adjustments, median islands, line marking and signage would also form part of the works. The intersection of Warrigal Avenue south is proposed to be converted into a one-way exit with left and right turn movements permitted out onto Quarter Sessions Road. Signage and line-marking is proposed to provide clear priority to Quarter Sessions Road traffic movements.

#### New road access from Quarter Sessions Road

A new access point is proposed from Quarter Sessions Road located along the southern boundary of the site.

This access point was chosen to avoid sight-line issues near Corang Road and the existing driveway servicing the Sydney Water pump station.

# Future road access to Sefton Road subject to negotiations with Sydney Water

The Sefton Road access point would require roadworks to continue Sefton Road through the Sydney Water site and into the Park. Sydney Water has provided in-principle support for the construction of an access through their Thornleigh Reservoir site. The future extension of Sefton Road to Quarter Sessions Road will also provide an alternate access for Westleigh in the event of an emergency.

#### Parking areas

It is proposed to provide all parking to service the sports facilities within the Westleigh Park site. The Master Plan provides in the order of 350 car parking spaces. These are distributed to relate to the main field platforms and have been predominantly provided as off-road parking areas with some additional parallel spaces between the central fields and northern athletics field.

#### Shared pedestrian and cycle path

Pedestrian access into the park is focussed on a 2.5–3m shared recreational and maintenance path network which enters the site at the road entries at Warrigal Avenue and the proposed new entry from the south. This will provide loop access around the perimeter of the facilities in addition to providing supplementary maintenance access. The shared path will be supplemented by pedestrian paths in the centre of the site which connect parking areas to facilities and provide access through the central parkland area between the southern and central fields. The shared path will connect to a broader local network of cycle paths via both on road and off-road links. The mountain bike trails and bush walking tracks being considered will also be connected to track and trail networks beyond the site.

#### Access points to adjoining MTB track network

The potential MTB track network is proposed to be accessed through Westleigh Park where users can use parking and other facilities, or cycle to the site and access the MTB track entry points via shared paths or the internal road network. Four access points are proposed along the eastern edge of the park accessed from the shared path or perimeter road. Where required ramps will traverse the low walling at the edge of the filled sports field areas.

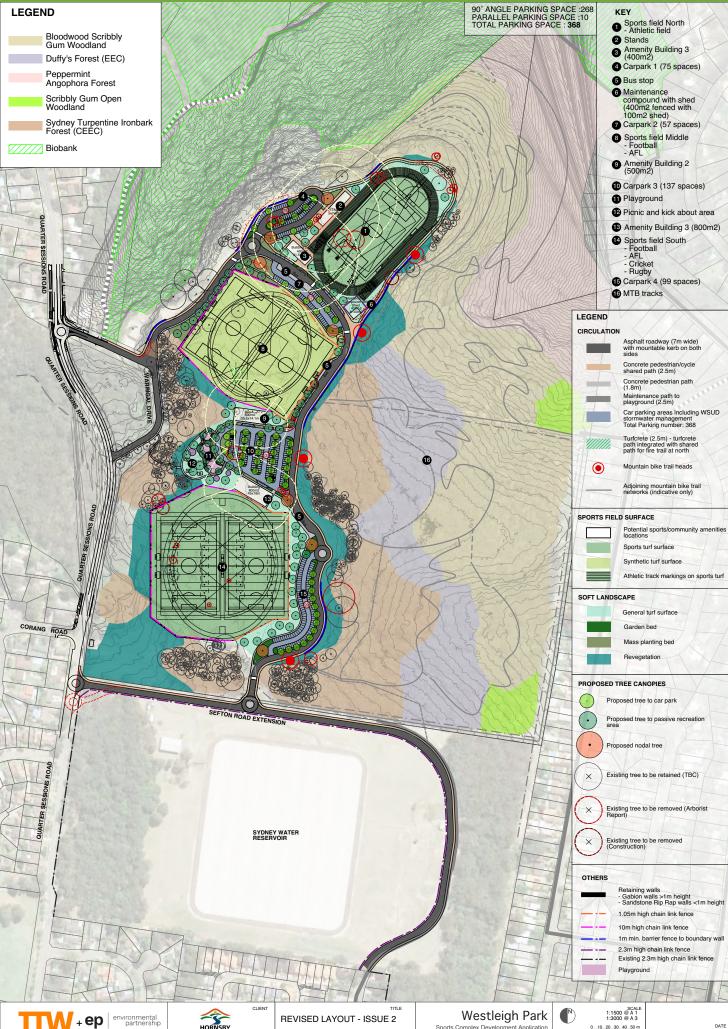
### Westleigh Park - North Zone



### Westleigh Park - South Zone





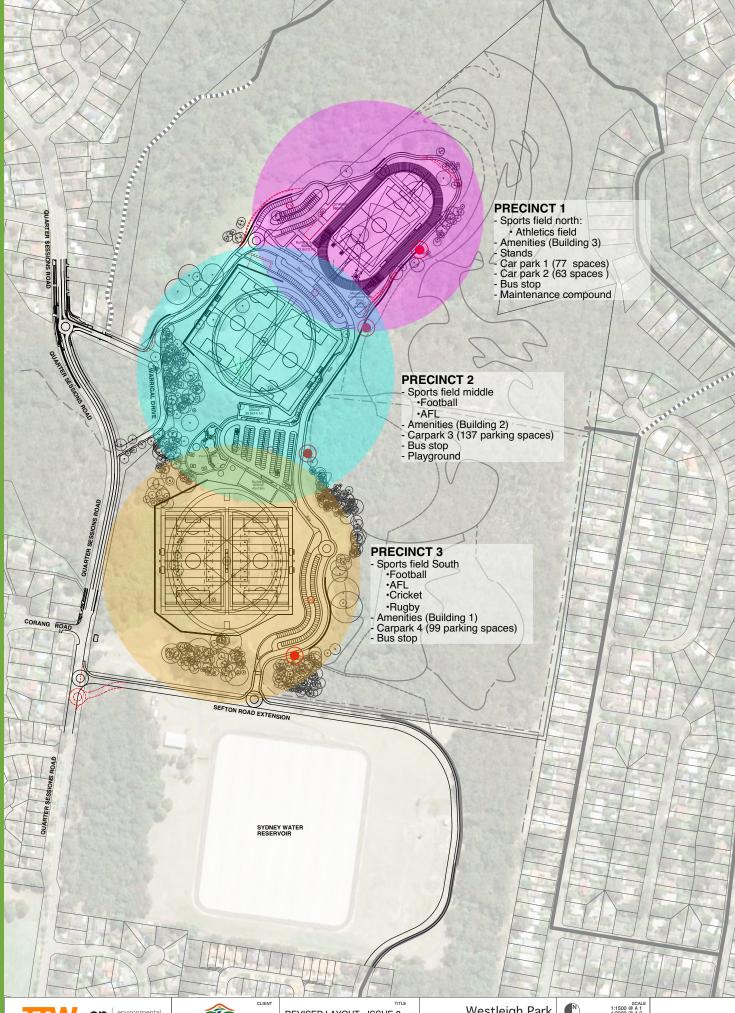




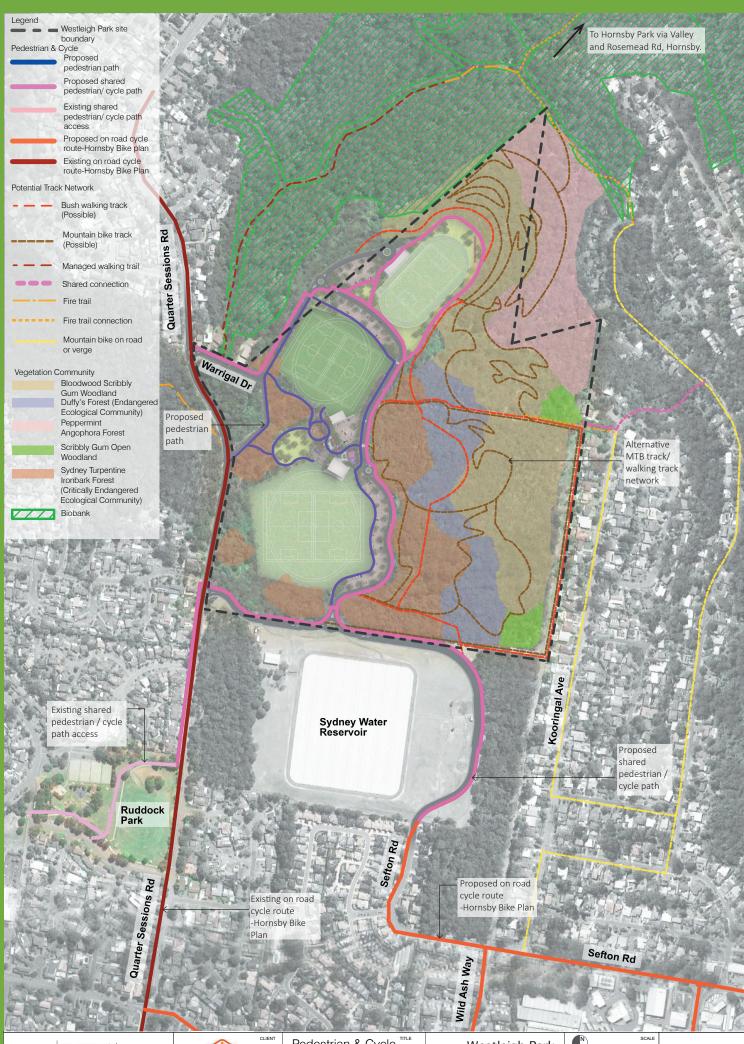




0 10 20 30 40 50 m







#### 4.2 Active Recreation

The draft Master Plan proposes three sports facility platforms that have been sited to integrate within the constraints of existing bushland vegetation and provision of road access. From south to north the field platforms step down the site executing a level change of around 8m overall. Each of the platforms is served by off street parking areas which have direct access to field and amenity facilities. The field platforms are connected by the shared pedestrian cycle path network and supplementary pedestrian path network.

# Southern multi-purpose natural turf sportsfield platform – full senior size

The south of the site provides the widest area where a playing field platform can be accommodated working within the developable zone defined by adjoining bushland. The draft Master Plan illustrates a multipurpose playing field platform which accommodates two (2) full competition size football fields or a full-size AFL field, with a full-size cricket ground during summer. The field platform sits above adjoining levels and is flanked by retaining walls of varying heights to the west, along with discrete ball fencing to prevent balls entering the bushland from the fields.

#### Central multi-purpose sportsfield platform

A second multipurpose field platform is proposed in the centre of the site. The available space through this zone will constrain field sizes to dimensions between minimum and maximum sizes for senior competition. The field platform sits above adjoining levels to the west and is flanked by retaining walls of varying heights along with discrete ball fencing to prevent balls entering the bushland from the fields. To the east the platform is recessed into the landform. This central facility could accommodate a synthetic surface or alternatively be developed as a natural sports turf surface.

#### Athletics Track and support facilities

To the north in the narrowest section of the previously cleared lands is proposed a third platform which can support a senior competition athletics track and internal field area (which could be used as a fifth football field if not being used for athletics). The area could accommodate an all-weather elite athletics facility or alternatively be developed as a line marked grass track. Surrounding grassed areas are proposed to accommodate field events to supplement the centre grassed field.

#### 4.3 Multipurpose park amenities buildings

Each of the field platforms is served by an amenities building at the same level as the field. The amenities buildings are accessed off the main carparks or the internal road network.

#### 4.4 Informal Recreation

#### Grassed viewing areas

At each of the field platforms peripheral grassed spaces provide for spectator viewing and warm up activities.

#### Open grassed informal games and picnic parkland

The play space is proposed to complement the adjoining parkland space with seating and shelter that provides for both local use and complements the sports uses of the fields. The park area has close pedestrian access to Warrigal Avenue with new path access to be provided.

#### Playground

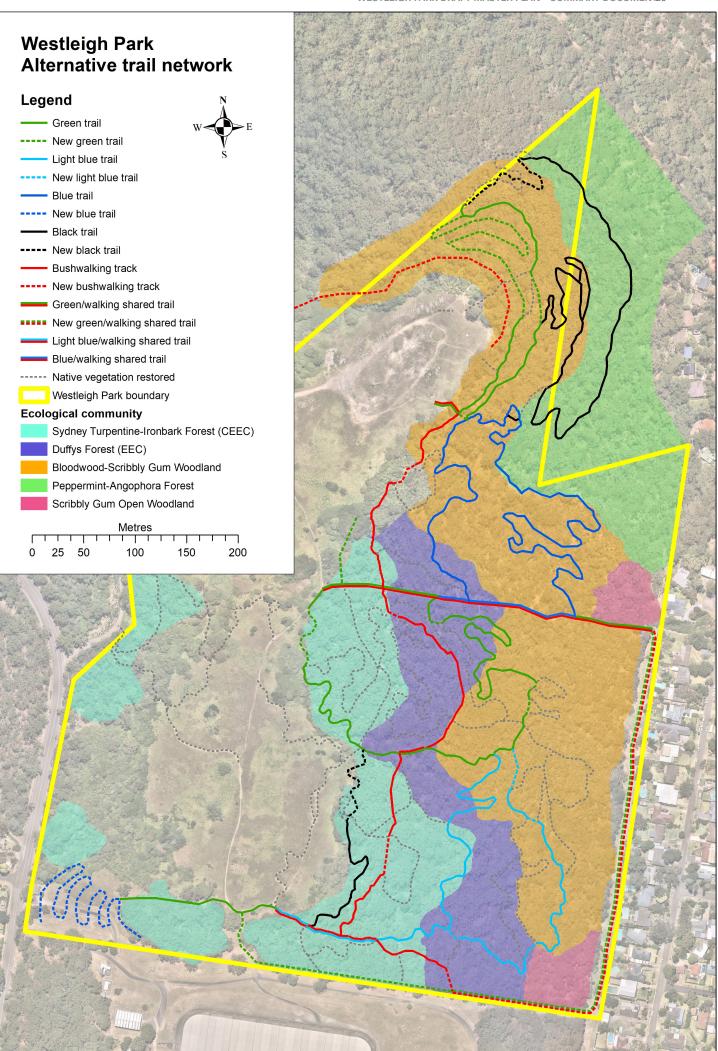
Between the southern and central field platforms is a passive recreational area that includes a potential play space area that is integrated into the level changes in this area.

#### Mountain Bike Trails

Vegetation and biodiversity surveys of the bushland at Westleigh Park has identified significant areas of critically endangered ecological communities (CEEC) and the presence of threatened species. In many cases the existing unsanctioned mountain bike trails pass through these areas.

Council has expressed a desire to provide for a wide range of recreational opportunities at Westleigh Park and recognises, while unsanctioned at the site, mountain biking remains popular with the community. Hence, an alternative trail network that attempts to balance the competing priorities for this area by reducing the extent of the trails in the high value bushland areas, keeping trails to the edges and creating additional trails in less sensitive areas has been identified. (refer to Figure 4.4).

The draft Master Plan also notes a potential link or connection between Westleigh Park and Hornsby Park, with the link to be provided to coincide with the delivery of the first stage of Hornsby Park. This link will offer another experience to visitors of either park, with it able to be enjoyed by those moving through the Shire on foot or bike.



#### 4.5 Indigenous heritage

Council has been working with local Aboriginal groups in relation to Aboriginal heritage items on the site (e.g. scarred tree). An Aboriginal Cultural Heritage Assessment has been completed and Council, under the guidance of local Aboriginal groups and heritage experts, are currently in the process of a detailed assessment of future management options for the heritage items.

#### 4.6 Vegetation management

Vegetation management considerations for the Draft Master Plan include avoiding and minimising impacts on adjoining bushland, specifically endangered communities, wherever practical. Any residual impacts will be rehabilitated and/or offset on-site.

#### 4.7 Stormwater management

A key consideration for recreational development of the site is avoiding any adverse impacts of stormwater on the local creek system. As such it is proposed that integrated water management be undertaken on site. This will involve treatment of runoff from roads and carparks in a combination of on-site bioremediation beds and wetlands where space permits, as well as capture, storage and reuse of stormwater to minimise erosive impacts downstream and provide an alternative water supply for irrigation and other uses.

#### 4.8 Approach to landfill management

#### Environmentally sensitive areas

In the environmentally sensitive zones of EEC a combination of:

- (i) localised removal of dumped waste and asbestos;
- (ii) localised isolation of asbestos exposure in accessible areas, accompanied with administrative controls
- (iii) utilising a long term EMP, is proposed as it reduces the impact of the environmentally sensitive areas.

#### Developable Area

A cap and contain approach is proposed to isolate the mixture of contamination in the fill. This includes excavation of landfill and relocation for capping elsewhere on site. A Remedial Action Plan has been developed to undertake the site remediation.

#### Earthworks

Although the site appears quite level to undulating, most of the land falls at a gradient of between 1:20–1:30. The draft Master Plan proposes the sports field platforms falling at a preferred 1:100. The edges of the platform will result in a deeper profile of fill material. In addition, around 40% of the cleared portion of the site is covered in landfill to a depth of less than a metre.

It is proposed to excavate down to natural ground (VENM) across a proportion of the site and relocate the excavated material to "containment cells" within the major fill zones required to establish the field levels. Site won material will be used were possible as capping material to these containment cells and as fill material to the major fill zones on the site. Some additional capping material to meet required specifications will be needed to meet the needs of the capping exercise. The final levels have been calibrated to account for a balanced cut and fill exercise, focussing the requirement for imported material on landscape and related construction materials (e.g. road pavement materials) to build up surface profiles.

#### 4.9 Staged Implementation of Master Plan

While the draft Master Plan arrangement lends themselves to staging of implementation of the recreational facilities through the south, central and northern sections of the site, the site remediation process and general earthworks and walling would be most cost effectively implemented in a site-wide approach. This is on the basis that around 40–50% of the cleared portion of the site is proposed to be excavated to natural ground with the landfill material redistributed to containment cells beneath filled areas.

# Conclusion

The draft Master Plan for Westleigh Park is derived from a range of investigations carried out during the term of the current Council. It provides for a significant range of opportunities for both active and passive or unstructured

recreation, while managing the environmental value of the site in a balanced and considered way. It also addresses a long-held community view of providing an alternate access from Westleigh in the event of an emergency.

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**Office hours:** Please check the website for the latest opening hours for the Customer Service Centre and Duty Officer.

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