

- Maintaining the Lane as an active circulation route is not viable if Huntingwood West is to operate as “*best practice designed*” employment lands, catering to industrial uses. The existing character and nature of the single carriage laneway with a kink in its alignment would not facilitate the efficient movement of vehicles through the site and significantly interferes with the desired subdivision pattern required for operation as industrial and employment uses.
- The laneway intersects with the Great Western Highway at a distance of only 350m west of the large and busy intersection of the Great Western Highway and Brabham Drive. The RTA has indicated they would not approve development of any intersection within 400m of such an important Highway intersection. They have indicated their preference for a fully designed intersection further to the west of the existing Rudders Lane junction. This RTA preferred intersection would provide access across the Highway, serving future parklands to the north and to the south. As such this concept proposal seeks to conform to this RTA advice.
- The proponent recognises the importance of heritage and local context as important factors in the creation of character and integrity of a site. Changing the alignment of Rudders Lane as proposed in this submission will bring operational and physical benefits and will greatly facilitate the development of the site for state significant Employment Lands. It is intended that a realigned Rudders Lane would contain interpretive features that would create a 'sense of place' and which would symbolically represent the site's rural and agricultural past.
- It is also considered that a realigned Rudder's Lane will continue to provide many of the same functions that the existing Lane provides.
  - The Lane would still provide physical access and circulation through the site as it has done since the 1890s. This concept proposal will maintain the function of the lane but appropriately design it to operate as a carriageway within an industrial area.
  - A realigned Rudder's Lane will continue to provide visual links through the centre of the site. As mentioned previously, interpretive treatment and detailed design will be used to reinforce the original scenic qualities of the original lane and the local area.

#### **4.3.2 Non indigenous summary**

The Huntingwood West site is not listed on the Blacktown LEP 1988 Schedule 2 as containing any significant heritage items, nor is it listed on the State Heritage Register. There are however elements in the landscape that have environmental and cultural heritage value. These values have been identified following consultation with the Department of Environment and Conservation (NSW), the Department of Planning and Blacktown City Council. These values have been responded to in the development of the concept plan, vegetation offset strategy and the landscape plan.

The *Visual and Landscape Assessment* by RLA prepared a number of guidelines specifically intended to inform the management of scenic resources at Huntingwood West. The following extract is taken from the RLA Assessment.

*5.5 Scenic Resource Management Guidelines*

*Huntingwood West has less visual and cultural constraints than Doonside but is more exposed to regional and local viewers.*

*The following guidelines are provided to ensure appropriate development of this land parcel:*

*a) Flood prone area to the immediate east of the creek corridor should be retained as a more rural character as it is at present. Existing creek line vegetation should be retained and augmented.*

*.....*

*e) All vegetation remnants especially that within the eastern part of the Eastern Creek corridor are to be considered for retention and enhancement with enrichment planting and regeneration techniques*

*f) Existing strands of vegetation should remain amongst future development areas. The vegetation should provide visual separation between buildings and structures as well as softening the appearance of larger industrial development*

These relevant suggested guidelines have been incorporated into the proposed concept plans. Existing creek line vegetation will be retained and augmented, all vegetation remnants especially those within the eastern part of the Eastern Creek corridor will be considered for retention and enhancement, and existing strands of vegetation wherever possible will be retained amongst future development areas (see Clause 3.3 of the DDC in **Volume 1**).

### **4.3.3 Indigenous heritage assessment**

A Heritage Impact Statement (HIS) has been prepared by Jo McDonald Cultural Heritage Management Pty Ltd (JMCHM) to assess the impacts of the proposed development on Indigenous heritage.

Two surface archaeological sites (WSP/13 and WSP/15) and one area of Potential Archaeological Deposit (PAD WSP5) have been recorded within the Huntingwood West Parcel. The development as proposed in the Huntingwood West Concept Plan will directly impact on both of these sites and the identified PAD.

The concept plan being prepared for Precinct Two of the Western Sydney Parklands has identified areas which are to provide a conservation outcome for Indigenous heritage. These are not within the Huntingwood West Parcel.

The recommendations of JMCHM have been incorporated into the concept plan proposal. Using a 'whole of development' approach, sites and areas of PAD in the Parklands and the Doonside Parcel are considered to have more potential for containing intact archaeological deposit in higher value landscapes. Salvage excavation will be conducted in these areas to provide archaeological context for the Conservation Areas and mitigate against the destruction of land with archaeological potential in the Huntingwood West Parcel.

Further archaeological investigation is not required within the Huntingwood West Parcel.

It is proposed that the Bungarrabee precinct of the Western Sydney Parklands will have an Indigenous heritage conservation strategy and outcome. This strategy, based on scientific and cultural values, will identify a conservation zone that encompasses a range of representative landscapes with the best conservation potential. It is anticipated that this conservation zone will be centred on the riparian zone of Eastern Creek north of the Great Western Highway. This represents the most meaningful management outcome and has the result that land which falls outside the conservation zone should be considered developable. The developable lands should be managed on the basis of the sensitivity mapping and the defined management principles. These principles are discussed further in Clause 2.4 of the DDC (see **Volume 1**).

#### **4.4 CONTAMINATION**

A *Report on Land Capability Assessment* was undertaken by Douglas Partners in January 2006. The report included an assessment of the West Huntingwood site. The objective of the study was to determine the suitability of the site for urban development, primarily with regard to site stability, soil erosion potential, soil salinity, soil contamination and minerals potential.

##### **4.4.1 Existing Site**

During recent site inspections the following potential contamination observations were recorded in relation to the Huntingwood West site:

- A number of soil stockpiles, building rubble and dumped material located at the south-eastern portion of the site,
- A service station located in the north-eastern portion of the site,
- Six (possibly asbestos) fibreboard structures across the site in various states of repair (some partially demolished),
- Farm machinery and several empty 1000 L plastic tanks were located on a concrete pavement in front of a farm shed,
- The whole area is used for horse grazing and training. A training track which may have used imported fill lies just beyond the site boundary, and
- Septic tanks were in use across the site.

##### **4.4.2 Phase 1 Contamination Assessment**

As part of the land capability assessment a *Phase 1 Contamination Assessment of the Huntingwood West Employment site* was undertaken in accordance with SEPP 55 and various NSW DEC guidelines including the *Guidelines for the NSW Site Auditor Scheme*. This assessment included a detailed review of the site history and developed a list of potential contaminants of concern based on the site history. Individual lots were classified as either high medium or low risk sites.

#### **4.4.3 Soil Contamination Potential - Huntingwood West**

Soil contamination risk across the site was assessed to be generally low. However, a range of further investigations in Huntingwood West was recommended to assess the actual degree of contamination present on site.

It was not anticipated that soil contamination will present a constraint to development and any areas of contamination identified, once remediated, will be suitable for the proposed land use. The Phase 1 Assessment recommended that further works and sampling be undertaken during a second phase of assessment.

#### **4.4.4 Phase 2 Assessment**

An EPA accredited site auditor was appointed to review the Phase 1 Assessment and to provide a Site Audit Statement at the conclusion of Phase 2. The results of this showed that no Health Based Investigation levels were exceeded for any of the contaminants of concern, indicating that the site is suitable for the proposed reuse with respective organic and inorganic contaminants.

However, localised areas of asbestos contamination were identified during the assessment. These areas will require the formulation of a Remediation Action Plan (RAP) addressing the remediation methodology and requirements.

On the basis of the work undertaken during the Phase 1 and Phase 2 Assessments, it is considered possible to make the site suitable for the proposed industrial reuse following remediation and validation of the areas of asbestos contamination. In addition to the RAP for identified asbestos contamination, it was recommended that an asbestos management plan be created and incorporated into the future management of the site. These recommendations will be incorporated into the future site management to address the possibility of finding hidden or undetected asbestos during site earthworks. A Separate DA will be lodged to manage the demolition of structures on the site.

### **4.5 DRAINAGE AND STORMWATER MANAGEMENT**

A wide range of studies have been undertaken in the assessment of the impacts of the proposed development on ground and surface water.

#### **4.5.1 Hydrogeology**

Douglas Partners has prepared a Land Capability Assessment for this project which included a detailed description of the hydrology of this site.

##### ***Saline Groundwater***

The general hydrogeological framework relevant to Western Sydney, including the subject site, is the shale terrain which is known for saline groundwater and where the salt accumulates by evapo-transpiration. In areas of urban development, this can lead to

damage to building foundations, lower course brickwork, road surfaces and underground services, where these impact on the saline zone or where the salts are mobilised by changing groundwater levels.

Urban development needs to be carried out with a view to maintaining the natural water balance so that long term rises do not occur in the saline groundwater level.

The Department of Planning infers a “*high salinity potential*” in the lower slopes and drainage areas of Eastern Creek, on their map entitled “*Salinity Potential in Western Sydney 2002*”. These DoP inferences are based on soil types, surface levels and general groundwater considerations but are not in general ground-truthed, hence it is not generally known if actual soil salinities are consistent with the potential salinities of DoP.

Whilst a detailed groundwater study was not undertaken as part of the current scope, recent groundwater investigations undertaken by DoP in the Blacktown area and previous studies of areas underlain by the Wianamatta Group and Quaternary river alluvium provide good evidence of groundwater conditions.

Salinity Risk areas have been identified and illustrated within Figure 10 of the Draft Huntingwood West DDC (see **Volume 1**). Clause 4.5.4 of the DDC relates to Salinity and seeks to manage and mitigate the impact of, and on, salinity. Amongst other controls, each future development application is to be accompanied by a salinity report prepared by a suitably qualified consultant.

#### **4.5.2 Potential Impacts on Water Quality**

Ecological Engineering has detailed the potential sources of stormwater pollution for the industrial area as well as treatments and management to mitigate any potential impacts arising from development.

##### ***Pollution Sources***

Stormwater pollution can result from industrial activity (e.g. chemical handling or a spill) or from processes/activities that occur as a result of typical high-density development. The pollutant pathways are varied and each has differing risk profiles that are related to work practices and the design of individual industrial allotment and building.

In industrial precincts with a high proportion of impervious surfaces, typical pollutants found in the stormwater runoff include litter, coarse, medium and fine sized suspended solids, nutrients, heavy metals, hydrocarbons, oil and grease. Industrial precincts also accommodate greater percentage of commercial traffic and an increased proportion of impervious areas.

Industrial activity is a common contributor to stormwater pollution. A wide range of activities occur within industrial precincts, dependent on the business nature. Industrial activities vary greatly and likewise so do the substances handled by industry. The industrial zoning for Huntingwood West would see land use which may include office

areas within a business park, a wide range of industry as well as warehouse or distribution centres.

Zoning for heavy industrial based activities is not proposed for this site. Activities associated with light industry however could include the delivery, handling, manufacturing, transport and storage of substances that have the potential to harm the aquatic ecosystem. For example chemical handling in manufacturing sites, oil and greases contamination from the automotive servicing sector.

Stormwater treatment elements, together with appropriate building design guidelines are included with this proposal to reduce the impact of these pollutants, with best practice stormwater management required for the site.

#### **4.5.3 On Site Detention of Stormwater/Drainage to Wetlands**

EDAW describes the wetland located in the Parklands west of the Huntingwood West development as the preferred stormwater storage method. The form and size of the wetland has been designed to provide recreational opportunities as well to ensure the facility operates as part of the site's stormwater system and also brings a natural aesthetic to the development.

As a larger element, the wetland is capable of supporting a range of vegetation types, mitigating between the Parkland and large scale buildings of the employment lands. This will greatly assist in establishing the concept and character of *'buildings in the park'*.

The Concept Plan application proposes the drainage of overland flow water into onsite detention basins and Parklands wetland. Ecological Engineering has investigated the requirements and design objectives of on-site detention storages. These have been determined to ensure that:

- (i) The rapid conveyance of frequent storm events will not impact on the geomorphic form of the low flow channel of Eastern Creek, and
- (ii) The peak flood level and extent corresponding to the 100 year ARI event at both upstream and downstream of the site have not been detrimentally affected.

#### **4.5.4 Stormwater Management**

The stormwater management strategy for the Huntingwood West Industrial Precinct is directed at achieving the following outcomes:

1. Treat stormwater emanating from the site and catchments upstream of the site to current best practice water quality objectives
2. Provide flood attenuation of storm events corresponding to the 1.5 year Average Recurrence Interval to pre-development levels to protect the geomorphic structure of Eastern Creek adjoining the site

3. Provide flood attenuation of flood events corresponding to the 100 year Average Recurrence Interval to pre-development levels

Stormwater management measures identified to provide the above engineering functions are also required to provide a suitable interface between the parklands and the industrial precinct. The desired landscape vision for the precinct includes a large wetland area with open water and wetland vegetation.

#### ***Bioretention Areas of 0.6ha***

Stormwater quality treatment will be met through bio-retention systems on site at the streetscale and in the precinct parks. The required total bio-retention area would be approximately 0.6 ha. There is sufficient area within the industrial precinct for water quality treatment such that it is feasible to meet best practice objectives using bio-retention systems as:

- Eco-Median
- Parks (drainage reserves, two in total)
- Bio-swales, street trees and rain gardens (optional)

#### ***A stormwater treatment wetland of 2.5ha***

A stormwater treatment wetland is also suitable for delivering the stated stormwater quality objective. The required total wetland area to meet best practice stormwater quality objectives is approximately 2.5ha and is located within Area C to the west of the WH employment area (see **Figure 8**).

#### ***Proposed Strategy***

Based on site assessment of opportunities and constraints, particularly the opportunity presented by the landscape vision for the precinct, the proposed stormwater management strategy is to integrate stormwater treatment functions into the Parkland's wetland. Some elements of the stormwater quality treatment train such as the capture of gross pollutants and sediment have been incorporated into the parks (drainage reserves) adjoining the wetland. This strategy is supplemented by a bioretention swale system along the main entry road to treat stormwater from the external catchment east of the development site.

This strategy is proposed as it will:

- (i) Overcome the higher risk of damage to on-site measures (such as streetscale bioretention systems) in an industrial precinct (compared with residential precincts);
- (ii) Be the most cost effective way to meet flood detention storage requirements (see further discussion below).
- (iii) Provide an adequate area to possibly treat stormwater from the additional up stream catchment that drains through the site.

- (iv) Be better integrated to the overall landscape design

The strategy also includes street-tree bioretention cells within the streetscape which will further increase the capacity to achieve stretch targets for stormwater quality treatment.

### ***Flood Detention***

Blacktown City Council's stormwater policy specifically states:

*"The frequency of bank-full flows should not increase as a result of development. Generally, no increase in the 2 year and 100 year ARI peak flows".*

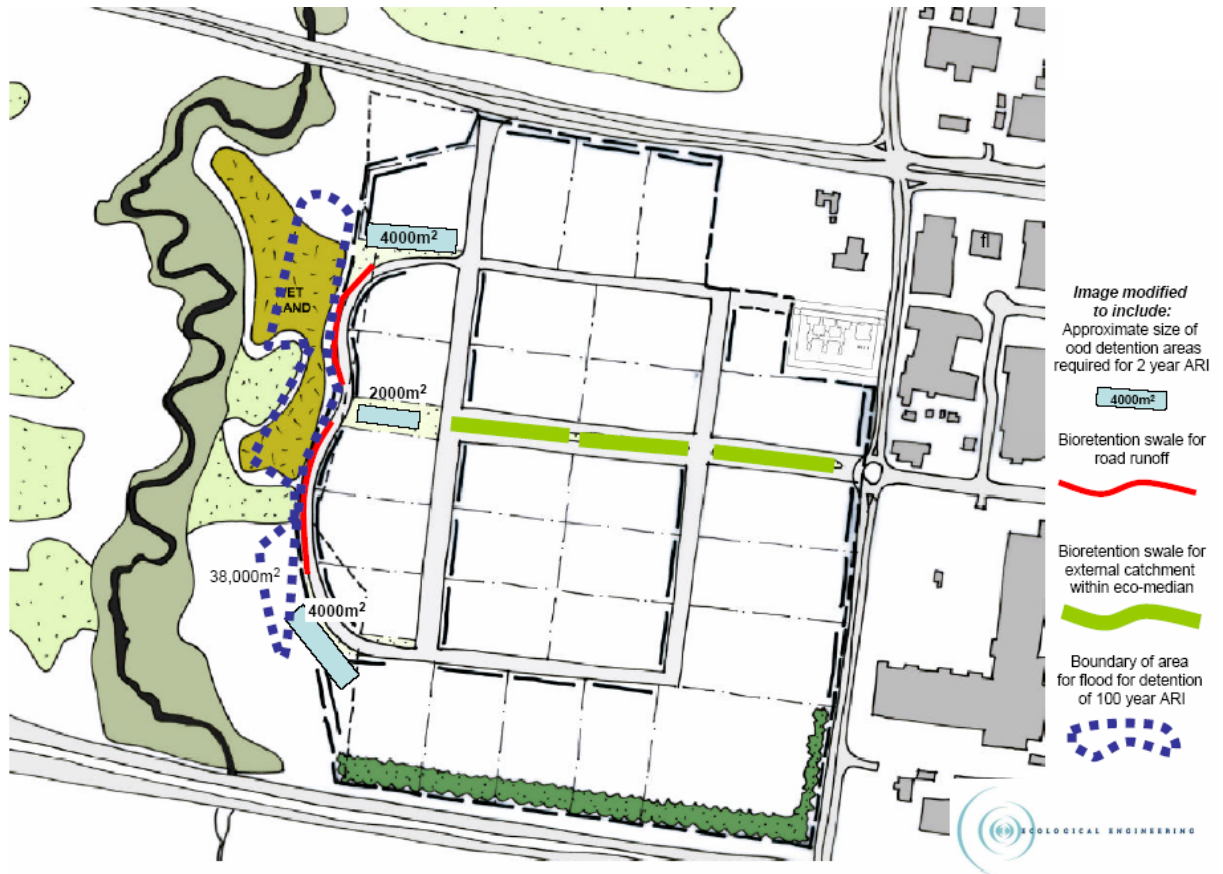
This policy is generally consistent with Landcom's WSUD objectives which stipulate that peak flow corresponding to the 1.5 year ARI event should be reduced to the pre-development level to protect the existing geomorphic form (and thus habitats) of the receiving waterway.

Hydrologic computations have identified the total flood detention storage requirement for the site as approximately 54,000m<sup>3</sup> of flood storage of which 34,000m<sup>3</sup> are required to return the pre- development 1.5 year ARI peak stormwater discharge... This requirement includes provision for flood retardation of stormwater discharge from the external catchments to the east of the site.

The provision of the required flood storage is through a combination of parks (drainage reserves) and the constructed wetlands. Flood storage provided at the drainage reserves will be first engaged and it is anticipated that this storage would be sufficient to attenuate events up to the 2 year ARI event to pre-development levels.

For larger events, flood storage provided in the constructed wetland will be engaged, with careful design incorporated to protect the structural integrity of the various elements with the wetland. The Wetland Concept Plan illustrates the typical sections of a precinct park retarding basin (see **Figure 9**).

Figure 9 Wetland concept



#### **4.5.5 Water Sensitive Urban Design**

The proposed Huntingwood West Concept Plan features best practice Water Sensitive Urban Design (WSUD). Details of this WSUD are included in the *WSUD Strategy* prepared by EcoLogical Engineering Pty Ltd, August 2006 (see Appendix I). These details are also incorporated into the DDC document for the site included within **Volume 1**.

#### **4.6 UTILITIES INFRASTRUCTURE**

A review of the civil infrastructure has been undertaken and prepared by YSCO Geomatics. The review investigated the existing provision and future provision levels required for water, sewerage, electricity, natural gas and telecommunications at Huntingwood West.

The overarching design principles of the indicative options for the subdivision layout provide sufficient scope to allow for efficient servicing of the employment zone. Conflict between the desirable environmental outcomes and the need to provide services, to the satisfaction of the relevant servicing authorities, are minimised and will be managed at the services design and installation level.

Servicing to and within the site is likely to be provided under the following fundamental guidelines, without compromising the development design philosophy.

##### ***Water***

Potable water to service the site can be supplied from the Prospect Hill elevated system with minor main amplification works expected to be completed within 6 months of lodgement of a Section 73 application to Sydney Water.

Reticulation of water supply within the employment zone will be within Sydney Water's street allocation.

##### ***Sewer***

The employment land is not currently serviced with sewer utilities. Internal servicing will be via gravity mains in a westerly direction towards Eastern Creek and then in a northerly direction under the Great Western Highway. An extension of the existing carrier mains adjoining Eastern Creek (north of the Highway) will provide a link to the Sydney Water mains system (to the Bungarribee carrier) which runs along Bungarribee Creek.

Internal sewer reticulation works will generally be contained within the proposed subdivision parcels.

### ***Electrical***

Adequate servicing of the Huntingwood West Employment Land requires the construction of a new Substation. Integral Energy, together with Landcom, has selected an appropriate site for the substation, in the North Eastern corner of the zone.

The selected site allows efficient connection with the existing electrical grid and is removed from the more environmentally sensitive areas of the Western Sydney Parklands. The preferred development option allows for efficient connection to the proposed substation, by underground reticulation, within Integral Energy's street allocation.

132 kV electrical feeders are to be constructed to supply the Zone Substation. These feeders will occupy allocations currently utilised by Integral Energy for lower voltage lines and, accordingly, will not have significant additional impact. Undergrounding of the existing overhead works is being investigated.

### ***Gas***

Agility do not, as a matter of policy, reticulate services within employment zones, at the initial development phase. The nature of Employment Zones is such that demand can be highly variable and upfront supply cannot be adequately gauged. Gas is available in the vicinity and may be reticulated within the development zone, on an individual customer basis. The preferred development option provides sufficient connectivity for Agility to provide a service to customers on demand. Agility's street allocations should allow for preservation of future servicing routes.

### ***Telecommunications infrastructure***

Telstra facilities are available in all roads surrounding the Huntingwood West Employment Land and standard services will be extended within the road network. The services will be reticulated underground within the nominated street allocation and will not have an adverse environmental impact. Above ground Telecommunication equipment is generally small scale and can be readily sited in the public domain, without significant visual impact.

Telstra offers higher level telecommunications services (involving optical fibres) which may appeal to the end user and developer. This higher level system requires a critical mass of end users and comes at an additional financial cost.

## **4.7 COMMUNITY CONSULTATION**

### ***Community Consultation***

Landcom has undertaken extensive community and stakeholder consultation during the preparation of the Concept Plan (October 2005 to September 2006) in accordance with the Draft Director General requirements.

### ***The Western Sydney Parklands Ideas Competition***

This project was publicly announced by the State Government in December 2004, followed by the commencement of an Ideas Competition (IC). The Concept Plan has incorporated feedback from an IC held between October and December 2005.

The Competition Brief sought to encourage ideas from both the general Community and professionals to assist Landcom in developing a plan for Bungarabee seeking design excellence. A total of 81 entries were received, including three international submissions.

The ideas competition provided a unique opportunity for delivering World's Best Practice to the development by allowing stakeholders to participate in the planning process, and as such it:

- Explored broad planning and design opportunities for the site taking into account its context, physical features and the surrounding land uses;
- Advocated for the integration of land uses and activities (interface) between the Parklands and the Huntingwood West employment zone (the subject of this Concept Plan);
- Promoted environmental, social and economic sustainability. In seeking these ideas Landcom has had dialogue with:
  - Local Government - Blacktown City Council,
  - Government agencies such as NSW Department of Planning, and Department of Education,
  - Professional associations ie. Australian Institute of Landscape Architects (AILA), and The Royal Australian Institute of Architects (RAIA),
  - Local residents and general public.
  - Government Agencies

Relevant authorities and government agencies have also been consulted as part of the Concept Plan process between January and September 2006. A Project Working Group (PWG) was established to discuss aspects of the project with Blacktown City Council.

A summary of the stakeholders that have been consulted is included in **Appendix H**.

## **4.8 DEVELOPER CONTRIBUTIONS**

The Concept Plan has reviewed Blacktown Council's requirements and proposes to develop roads, stormwater management and water quality systems as well as street tree planting in accordance with Council's standards. The details have been outlined in the Design Development Code included within Volume One of the Concept Plan.

A development contribution towards the upgrading of the local and regional road network is proposed with the Roads and Traffic Authority. These negotiations are currently underway and are underpinned by the TMAP prepared by Maunsell.

This Concept Plan is not seeking to enter into a Voluntary Planning Agreement.

## 4.9 OTHER ISSUES

### 4.9.1 Built Form

Development Design Controls for Huntingwood West have been prepared by Architectus; they are an important part of this submission (see **Volume 1**). The controls have been developed to ensure that a quality urban outcome, as described in the principles below, is realised in the built form.

#### ***Urban Design principles:***

- To ensure that the built form establishes a strong relationship to open space and to the Parklands areas.
- To ensure that development contributes to cohesive streetscapes and desirable pedestrian environments.
- To ensure a safe environment by promoting crime prevention through good urban design.
- To encourage pedestrian use of streets to enhance pedestrian safety and security.
- To promote energy efficient building orientation and envelopes.
- To avoid monotonous building forms and design and to avoid street views of long building elevations not screened by landscaping.
- To encourage the provision of a range of distinctive building forms that promotes the identity of each tenancy.
- To encourage a high quality built form by encouraging activity on elevations fronting streets, ensuring buildings address streets and emphasising vertical forms with landscape, buildings and street lighting.

### 4.9.2 Landscape

EDAW has prepared a landscape plan that is intrinsically connected with the land subdivision option proposed (see **Volume 1**). The landscape character and structure of the concept plan has been influenced by its location adjacent to the Western Sydney Parklands.

The landscape design requires the planting of Cumberland Plain plant communities in streetscapes, building setbacks and the public domain, extending the reconstructed Parkland ecologies of Eastern Creek and the Parklands into an urban, employment area.

The landscape design in turn relates strongly to the proposed WSUD strategy, where the Huntingwood West landscape will interact with the adjacent Parkland landscape at the wetland. The wetlands form part of the storm water management strategy and they will also provide an aesthetic feature in the landscape. It is envisaged that the wetland will be an attractive place offering passive recreation opportunities.

A distinct landscape treatment is proposed for the park edge road (see Landscape Plans, **Volume 1**). This defines the edge between privately and publicly managed lands and also demarcates urban (Huntingwood West) from natural (Eastern Creek) areas.

#### **4.9.3 Visual Impact**

Richard Lamb and Associates (RLA) prepared a Landscape and Visual Assessment in February 2006 for the Huntingwood West site. The assessment explored the site's visual character, scenic resources, landscape and visual constraints. In summary the management guidelines recommended and adopted for the Huntingwood West land include:

- Preservation and augmentation of existing native vegetation, notably within the Eastern Creek corridor.
- Maintaining some views to core parklands west of Eastern Creek for motorists.
- Enhancing the intersections where Brabham Drive meets The Great Western Highway and the M4 as nodes with supplementary vegetation and appropriate built forms.
- Developing the eastern side of the site (Land Area A and B)<sup>2</sup> for employment opportunities, the western part and the Eastern Creek corridor (Land Area C) being retained in their existing character.

The indicative land subdivision option proposed for the Huntingwood West employment lands fit comfortably with these recommendations.

Vegetation will be consolidated and rehabilitated in Land Area C along Eastern Creek and dedicated as Parkland to protect the natural and scenic qualities. The assessment by RLA considered that the visual links to places outside the Huntingwood West parcel were not of high importance.

It is proposed that views into and out of Land Areas A and B, be screened with buffer planting along the M4 and Brabham Drive to provide acoustic as well as psychological separation between traffic and the employment lands. Views into the parkland side of the site will be afforded from the M7, as it is elevated and offers sweeping views across the landscape.

#### **4.9.4 Bushfire**

Eco Logical Australia prepared a 'Bushfire Advice' report for the Bungarribee Precinct in February 2006 which advised that the principles of '*Planning for Bushfire Protection*' (Rural Fire Service, 2001) should be applied at the site. Rural Fire Service provisions

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<sup>2</sup> Lands Areas A, B and C as defined in **Figure 2**.

relate to establishing adequate Asset Protection Zones (APZs) between buildings and bushland, perimeter trails, access, water and adequate construction.

The location and size of APZs are based upon the capacity of the site to support different vegetation communities (fuel groups) and hypothetical conservation/development boundaries. The Eco Logical Australia advised that as Huntingwood West would support Industrial land uses and operate as employment land an APZ of 20m was required between buildings and large woodland communities in the Parklands.

The Huntingwood West concept plan proposes a distinct separation of the Parkland and employment lands, the edge is clearly delineated by the Park Edge Road. The wetland, located on the west of the road (within the Parkland) and adjacent verge and roadway (See Landscape Plans, **Volume 1**) contribute to the 20m APZ.

#### **4.9.5 Geotechnical**

Douglas Partners undertook a '*Land Capability Assessment*' of the Bungarribee Precinct. This report included details on geotechnical issues

Stability and erosion and sedimentation do not constrain the site or impact adversely on development potential of the indicative subdivision layout plans. It was recommended that an erosion and sedimentation control plan be developed for the site before construction is approved.

Salinity hazard was detected and mapped onsite, various means of combating the salinity hazard were provided in the report including strategies for building in saline environments. These have informed the design of the subdivision layout options; land use decisions and landscape design.

In its current state, portions of the site are waterlogged and possess silt and sediment accumulation to several metres depth. Footing design of the proposed structures will need to accommodate these factors. It is assessed that these detailed design issues are best addressed at "built-form" DA stage and through detailed design controls.

## **5. GENERAL ENVIRONMENTAL RISK ANALYSIS**

In addition to the assessment of the issues included above, an environmental risk analysis has been undertaken below. This summary aims to identify potential environmental impacts associated with the project, as well as proposed mitigation measures. Also included are any potentially residual environmental impacts after the application of proposed mitigation measures and/or any further studies and assessments that may be required to assess these factors.

Table 5.1 Risk Assessment

Description	The risk is ...	Stakeholder	Likelihood of occurrence	Rating	Mitigation	Residual Likelihood of occurrence	Residual rating	Responsibility
<p>PHYSICAL POLLUTION</p> <p>Air Impacts No individual air quality assessment has been undertaken</p>	Proposed subdivision works and associated operation activities (Employment Land) may contribute to air pollution	Developer, Council, end user	low	C	Further studies will be undertaken at the individual DA Stage as required in accordance with Council and other authority requirements.  Standard conditions of consent – Erosion and sediment control plans etc.	low	C	Developer, end user
<p>Water impacts Drainage Flood and Water Quality Jan 2006, URS</p>	Refer Section 4.5. Water treatment of stormwater runoff from the proposed subdivision land is required to prevent pollution and flooding.	Developer, Council, end user	low	B	Detailed design of wetland to be undertaken at a later stage. Concept approval sought in this submission.	low	C	Developer, end user
<p>Soil impacts</p>	Proposed subdivision works and associated operation activities (Employment Land) may contribute to soil contamination.	Developer, Council, end user	low	B-C	Further studies will be undertaken at the individual DA Stage as required in accordance with Council and other authority requirements.  Standard conditions of consent – Erosion and sediment control plans etc.	low	C	Developer

Description	The risk is...	Stakeholder	Likelihood of occurrence	Rating	Mitigation	Residual Likelihood of occurrence	Residual rating	Responsibility
Noise and vibration impacts	Proposed subdivision works and future associated operation activities (Employment Land) may contribute to noise pollution.	Developer, Council, end user	low	C	The site is well removed from "sensitive" land uses (including residential areas). Further studies will be undertaken at the individual DA Stage as required in accordance with Council and other authority requirements.	low	C	Developer construction company
<b>BIOLOGICAL</b>								
Fauna	Removal of existing habitat will adversely impact biodiversity levels and health.	Developer, Council, end user, flora and fauna communities	mod	B - C	A 'Draft Strategic Offset Directions' has been prepared and adopted into the Concept plan design. (see Appendix E)	low	C	Developer, end user
Flora						low	C	Developer, end user
Biodiversity					A detailed biodiversity offset strategy will be developed in conjunction with future Parklands Concept Plan (See 'Draft Strategic Offset Directions' Conclusion).	low	C	Developer, end user
Threatened species. Populations, communities, habitat						low	C	Developer, end user
<b>RESOURCE USE</b>								
Community Resources		Developer, Council, end user	low	C	A 'Civil Infrastructure Report' has been prepared by URS and has been incorporated into the Concept Plan proposal.			
Natural resources	Bushfire could effect the developed site (from the	Developer, RBFS, Council,	low	C	Bushfire management advice and APZ's have been incorporated into	low	C	Developer

Description	The risk is ...	Stakeholder	Likelihood of occurrence	Rating	Mitigation	Residual Likelihood of occurrence	Residual rating	Responsibility
	north and west)	end user			the Concept plan proposal.			end user
Transportation	Proposed intersection to HW Employment Land will adversely effect LOS of existing intersections despite TMAP advice.	Developer, Council, end user, RTA	low	C	TMAP has been prepared with recommendations (See Appendix D)			
COMMUNITY								
Social impacts	Positive impact The creation of new jobs in a strategically important region.	Council, State Government, End user, Employment sector	high	B	Requires continued State Government commitment.	-		Developer
Economic impacts	Positive impact The creation of up to 800 new jobs in a strategically important location.	Council, State Government, End user, Employment sector	high	B	Requires continued State Government commitment.	-		Developer
Heritage, aesthetic, cultural impacts	HIS has been prepared for both the indigenous and non-indigenous heritage. Any risks related to damaging artefacts or significant archaeological sites has been avoided. Landscape integration of CPW will create distinct, appropriate and	Developer, Council, end user.	mod	B - C	Further work is required to attempt to determine the extent and quality of the Old Inn site. (See Section 4.3). Management of landscape required.	Low	C	Developer, end user

Description	The risk is ...	Stakeholder	Likelihood of occurrence	Rating	Mitigation	Residual Likelihood of occurrence	Residual rating	Responsibility
	attractive Employment estate.							
Land use impacts	Positive impact: Contribution to Motor Sport vision of BCC and creation of world class green Employment Estate.	Developer, Council, end user, surrounding stakeholders	high					Developer, Council
Transportation impacts	The development of the site will result in an increase in traffic on local roads and existing intersections.	Developer, Council, end user, surrounding stakeholders	mod	B - C	A TMAP has been prepared by Maunsell and its recommendations on intersection design, scale, additional roads etc has been incorporated into the Concept Plan proposal.	low	C	Developer, end user, RTA, Council

## 6. CONCLUSION

The 61 ha land area and proposed development known as Huntingwood West is the subject of this Concept Plan Application and Environmental Assessment (EA) under Part 3A of the *Environmental Planning and Assessment Act 1979 (EP&A Act 1979)*.

Huntingwood West is to be included as a state significant site within the proposed *Western Sydney Employment Hub*. The Huntingwood West project is considered to be a Major Project within the *NSW Major Projects State Environmental Planning Policy (Major Projects SEPP)*. The project is of State and regional significance as it will contribute funds to the development of the Western Sydney Parklands, which are a major component of the Metropolitan Strategy. Funds will be returned to the Parklands Trust which will be established in 2007 to manage the Parklands.

This employment lands application seeks consent for a land subdivision layout, types of employment uses, intersections and essential infrastructure and development design controls. The proposed subdivision is a result of a comprehensive urban planning exercise that seeks to maximise the site's opportunities and capitalise on its proximity to Sydney's major transport network (i.e. the M7 and M4 motorways) and the adjacent regional Parklands.

The vision for Huntingwood West is that it "becomes a state of the art green employment estate with a strong connection to the Western Sydney Parklands, incorporating best practice urban design and environmentally sustainable initiatives.

This environmental assessment has been prepared in full compliance with the requirements of the Director General of the Department of Planning. It is assessed that the concept proposal will deliver a high quality employment estate that will result in:

- Positive impacts both socially and economically with respect to job creation for both Blacktown and the Western Sydney Region;
- A new model working environment for employees;
- New buildings seeking excellence in architectural design;
- Traffic managed through road improvement works and excellent connectivity to Sydney's regional road network;
- A best practice Water Sensitive Urban Design scheme including a new wetland for the adjoining Parklands; and
- Revegetation in the adjoining Parklands with Cumberland Plain Woodland landscape elements to aid biodiversity.

The Planning Group (NSW) Pty Ltd supports this application and recommends its approval.

## 6. BIBLIOGRAPHY

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*'Bushfire Advice'*, Feb 2006 - Eco Logical Australia Pty Ltd

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*'Ideas Competition Supporting Environmental Information'*, 2005 - Landcom

*'Land Capability'*, Jan 2006 - Douglas Partners

*'Management Vision and Concept Plan Options'*, March 2004 - URS, Turf Design, Ian Perkins, Linda Corkery, Haglund Associates & Banksia Heritage

*'Preliminary Noise Assessment for Rezoning'*, Jan 2006 - Heggies Australia

*'Site Audit Report - Doonside'*, HLA Envirosiences

*'Social Sustainability Assessment for Doonside'*, May 2006 - Elton Consulting

*'Sustainability Report'*, 2005 - Landcom

*'Transport and Accessibility Assessment'*, Feb 2006 – Maunsell

*'Visual and Landscape Assessment'*, Feb 2006 - Richard Lamb and Associates

## **APPENDICES**

- Appendix A: Director General's Requirements
- Appendix B: Not Included
- Appendix C: Relevant LEP Clauses and Guidelines and Table of Concept Plan Compliance with EPIs
- Appendix D: Western Sydney Parklands TMAP Assessment – Maunsell,
  
- Appendix E: *Draft Strategic Offset Directions* – Eco Logical Australia
- Appendix F: *WSUD Strategy* - Eco Logical Engineering
- Appendix G: *Heritage Impact Statement* - Godden Mackay Logan
- Appendix H: Consultation record from Landcom and APP