

## **Preliminary Environmental Assessment**

### **Proposed Engineered Landfill, Waste Management Facility & Subdivision**

**Archbold Road,  
Eastern Creek**

Client: Light Horse Business Centre  
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## **1 INTRODUCTION**

This Preliminary Environmental Assessment has been prepared for Light Horse Business Centre to accompany an application to the Department of Planning for an engineered landfill for rehabilitation of a hard rock quarry, a waste management facility and subdivision of land off Archbold Road, Eastern Creek, seeking the Minister's approval for a development application to be assessed under Part 3A of the Environmental Planning and Assessment Act.

More specifically, the proposal involves filling the existing quarry with specified material in an engineered landfill to enable the land to be developed for future employment generating activities. This activity is proposed to be carried on in such a way as to ensure an orderly and coordinated sequence of extraction and rehabilitation consistent with the requirements of SEPP 59 and in order to achieve the progressive construction of landforms that are suitable for future development as employment lands.

An ancillary and incidental part of the engineered landfill, involves processing of imported material, including sorting, separating, crushing and grinding operations to ensure all fill materials meet specific classification criteria. This processing is essential to ensure that the quarry is appropriately rehabilitated for immediate future use when final levels are achieved.

The sorting and processing to recycle, recover and reuse waste materials constitutes a "waste management facility". This will be undertaken within the area on the site identified as a Materials Processing Centre (MPC). Reusable and surplus materials that have a commercial value resulting from processing at the MPC will be stockpiled, sold and transported off site.

Two EPA licenses (Nos. 5073 & 494) issued under the Protection of the Environment Operations Act exist in relation to current operations on the land. The licenses apply to the Light Horse Business Centre land and adjacent land currently owned by Hanson Pty Ltd but contracted to be purchased by the Light Horse Business Centre. Hanson (previously known as Pioneer) has occupied the land and has carried on the commercial activities permitted under the licenses for over 50 years.

The purpose of this Assessment is to describe the site and its surrounds, describe the proposed development, briefly outline relevant planning provisions and to identify the key issues arising from an environmental risk analysis.

This report is divided into seven sections. The remaining sections include a description of the proposal; details of the site location; identification of the relevant planning provisions applying to the site; a description of the existing environment; a discussion of key issue arising from the environmental risk assessment; and a conclusion.

## **2 DESCRIPTION OF PROPOSED DEVELOPMENT**

### ***2.1 Proposed Engineered Landfill***

Once current full time extraction operations undertaken by Hanson finish in late 2006, it is proposed to rehabilitate the redundant quarry. This is to be achieved by backfilling the quarry with selected materials as an engineered landfill. The rehabilitation of the quarry will permit the return of groundwater close to its natural level and will allow the final rehabilitated landform to be used for employment generating activities, as envisaged by the provisions of SEPP No.59.

Details of the fill material and the engineering processes as well as the anticipated finished levels of the rehabilitated site are provided in the Extraction and Rehabilitation Plan and accompanying plans prepared by Hyder Consulting.

Consistent with the EPA Licenses currently in force for the site, the owner will import suitable material for stockpiling, processing and manufacture at the MPC. Some of these suitable processed materials will be used in the rehabilitation of the quarry. Recycled materials will be sold and transported off-site for re-use in construction and landscaping projects. Soil, rocks, gravel, clays and other materials removed during development processes will also be processed for re-use or as part of the quarry rehabilitation.

The various components of the proposed development are described in detail in the following sections.

#### ***2.1.1 Site Development Works***

Filling of the quarry will not of itself require any major infrastructure or site works, such as large scale buildings. Surface requirements for site rehabilitation will be similar to current infrastructure already located on site and will include:

- Access roadway;
- Truck and parking areas;
- Weighbridge and office facilities;
- Workshops, storage bays and staff amenities;
- Water storage facilities; and
- Storage and sales area for recycled products.

The existing informal roads and pit access will be used for the delivery of material imported from external sources. Fast growing endemic plants and trees will be planted at the edge of the quarry and in other locations to create a buffer zone between the proposed the rehabilitation activities and surrounding land used for unlike purposes to assist in screening those activities.

The location of proposed buildings and structures, as well as existing buildings and structures that are to be retained and the landscaped buffer zone are

illustrated in the plans prepared by Joshua Farkash and Associates and Site Image that accompany this application.

### **2.1.2 Engineered Landfill Specification**

At the completion of full time resource extraction, backfilling of the pit with engineered landfill will commence until the required surface level is achieved. This level is expected to form an appropriate topography to meet the surrounding surface levels. A plan and indicative section illustrating the proposed finished ground level has been prepared and accompanies this application. These are indicative only as the achievement of these levels is not anticipated for at least twenty years from commencement.

The estimated volume of material required to fill the quarry is currently in the order of 11 million cubic metres. However, this figure will increase if the quarry access roads are removed during filling. The total potential could be up to 15 million cubic metres.

The fill materials will meet specifications for size and compaction rates as may be appropriate from time to time and generally will be composed of:

- virgin excavated natural material (VENM) ranging from rock to sand and cohesive soils; and
- Fill materials, (excluding putrescible fill materials), which are assessed as either inert fill material or solid fill material following the technical assessment procedure outlined in Technical Appendix 1 of the '*Environmental Guidelines: Assessment, Classification & Management of Liquid & Non-liquid Wastes*' (NSW EPA 1999) as defined in Schedule 1 of the Protection of the Environment Operations Act 1997.

Different materials will be required from time to time to achieve different outcomes during the quarry filling process. These materials generally include durable rock and rubble coarse, coarse granular materials, grade filter material, graded coarse gravels and clayey materials. A breakdown of these materials is provided in an Extraction and Rehabilitation Plan prepared by Hyder Consulting.

The Department of Environment & Conservation is expected to issue prescriptive specifications for recycled materials. It is expected that the materials used will meet published specifications and be otherwise fit for the specific purposes for which they will be used.

However, at lower depths of the quarry the fill material may also include soils partially contaminated with asbestos. These are soils in which asbestos sheet or pipe may have been observed, but may nevertheless be suitable for emplacement and compaction. This is material in a bonded matrix and not powders fines or friable material.

The disposal of asbestos contaminated soils is generally problematic for the community, sometimes resulting in difficulties in disposing of large volumes of soil having very low levels of contamination. The emplacement of this category

of material at quarry depths of more than 20m below the surrounding landform is a practical method for the community to provide for its safe disposal while simultaneously using it as an engineering material to aid fill and compaction.

Only soil containing products or particles of asbestos which constitute not more than 1% by weight or 5% by volume (whichever is greater) of any day's emplacement of materials will be used. Emplacement shall be in accordance with the Regulations made under the Protection of the Environment Operations Act concerning the safe handling of asbestos.

It is also proposed to use recycled inert materials which most closely approximate the specifications and characteristics of the natural material in cases where there is insufficient supply of natural material of the type required to achieve the desired engineering outcome.

Recycled inert materials, and or other blends of materials that are "fit for purpose" which are used in the landfill, will be required to meet the specifications detailed in the publication '*Specifications for Supply of Recycled Material for Pavements, Earthworks and Drainage*' prepared by Resource NSW dated 2003, specifically for Select fill, Class S as described in Table 1 of that document or such other replacement specification issued from time to time.

It is anticipated that the quarry will be filled at a slow rate at commencement, building progressively at the five year period to a rate of approximately 1.5 million tonnes (or equivalent of 1million m<sup>3</sup>) per annum.

### **2.1.3 Transport and Placement of Imported Materials**

Imported fill material will arrive on the site in a variety of trucks with a range of sizes and load capacities. Initially, it is expected the trucks will travel via the current right-of-carriageway connecting to Old Wallgrove Road and the M7 Motorway. Future access to the site may also be via Archbold Road when the M4 ramps are installed. The trucks will proceed to the weighbridge, located as shown on the development application plans, where the weight of the vehicle will be recorded and the type of material assessed. The material will then be delivered to either:

- (a) the MPC at the top of the quarry; or
- (b) directly to the base of the quarry for final placement and compaction.

At the base of the quarry, the fill material will be spread in horizontal bands over an area generally not exceeding 65m in width and in 0.5m in depth. The material will then be compacted by a compactor & bulldozer to minimise future differential settlement of the filled area and allow for future industrial development.

Management of the material during the emplacement process is described in a more detailed manner in the Quarry Rehabilitation Environmental Management Plan which has been prepared in connection with this project.

Asbestos contaminated soils, if received at the site, will be transported to the base of the quarry for immediate emplacement on the same day that it is received.

It is proposed that no members of the public will be permitted to access the quarry floor area. Access will be restricted to employees of the site operator, with those employees operating under specific work directions to ensure safety.

It is currently anticipated that no more than 50 trucks a day will travel to the base of the quarry for the emplacement of material. All other materials will be stored temporarily at the MPC. Backloading of blue metal extracted during the roads extraction process will be utilised whenever possible in order to minimise truck movements.

Additionally, lowering of materials in batches by a suitable relay of covered conveyors or tubes from one level to the next is currently being investigated as a more efficient method of depositing large volumes of soil material to the base of the quarry. If implemented, this would significantly reduce truck movements within the quarry.

#### **2.1.4 Landscaping**

It is proposed to provide a landscaped buffer around the engineered landfill and MPC facility to reduce any visual impacts associated with the proposed operations. The landscaped buffer is identified on the plans prepared by Site Image – Landscape Architects. Additional details of the proposed landscaping are provided in a report and landscape plans prepared by Site Image - Landscape Architects.

### **2.2 Materials Processing Centre**

As indicated, material not determined as suitable for immediate emplacement in the quarry will be delivered to the proposed MPC. The MPC, located to the north-west of the quarry, will include the following components:

- Material receiving area;
- Raw materials stockpiling area;
- Processing/refining area;
- Finished materials stockpiling area; and
- Materials loading out area.

The layout of the MPC is illustrated in the plans prepared by Joshua Farkash and Associates.

At the MPC the material will be sorted, processed recycled and refined to engineered standards for landfill or resale purposes. The material will then be stockpiled either for sale as recycled material or be transferred into the quarry for rehabilitation. Reusable and surplus materials that have a greater commercial value resulting from processing at the MPC will be stockpiled, sold and transported off site.



Activities to be undertaken at the MPC will include receiving, sorting, screening, sieving, crushing, grinding, shredding, separating, composting, processing, recycling, recovering, manufacturing, engineering and selling materials. The materials to be processed at the MPC will include:

- brick;
- concrete;
- tile;
- soil;
- rock;
- clay;
- woodwaste;
- greenwaste;
- glass;
- plastic;
- paper;
- cardboard;
- municipal waste;
- dry waste;
- solid and inert waste categorised by reference to Table A3 & A4 of the EPA Guidelines for solid waste landfills;
- tyres;
- asphalt and bituminous materials;
- excavated materials;
- demolition materials;
- non-chemical waste generated from manufacturing or services; and
- ferrous and non-ferrous metals and scrap.

Car parking for employees will be provided as shown on the plan within the area designated for the MPC. Parking for trucks, plant and machinery will be provided as shown on the plan adjoining the workshop. It is expected that this area will accommodate up to 60 trucks.

An administration office, training rooms, first aid facilities and logistics central control and communications centre will be constructed in the area designated in the MPC plan. The MPC will be equipped with suitable amenities constructed to Australian Standards.

The MPC will also include a plant workshop having approximate dimensions of 40m x 20m x 6m. It will consist of 8 bays in which 5 mechanics, welders and boilermakers will provide maintenance and service to trucks and other plant and equipment utilised within the MPC and landfill site. Diesel fuel will be supplied by means of an approved double skinned diesel fuel tank licensed under the Dangerous Goods Act.

Water supply for dust suppression will be pumped from the existing Hanson supply. Until further development occurs on surrounding lands, fresh water will be pumped from the Hanson supply at the eastern boundary of the site, or will be supplemented by supplies delivered by tanker and from rainwater collection tanks and filtration systems.

Plant will initially operate using diesel motors, as it does currently for the quarry operations. However, it is expected that when improved electricity supplies are available a conversion to electric motors will be implemented on suitable equipment.

A drive-through wheel wash will be constructed so as to prevent the tracking of mud onto public roads when public roads are built in the precinct.

### **2.3 Proposed Subdivision**

The proposed development involves initial subdivision of the western part of the site into street block allotments, including the undertaking of subdivision works including the provision of roads, stormwater drainage, landscaping and relevant utility services. Details of the proposed subdivision are provided in the plans prepared by Joshua Farkash & Associates.

#### **2.3.1 Concept Subdivision Pattern**

Whilst it is not proposed at this stage to undertake the final subdivision of the land, an indicative final subdivision plan has been prepared by Joshua Farkash and Associates indicating how the proposed superblock allotments may in future be further subdivided to facilitate employment generating activities on the land of the type envisaged in the Precinct pursuant to SEPP No.59. Final subdivision of the site will form one or more separate development applications.

#### **2.3.2 Access, Internal Layout & Manoeuvring**

It is proposed to construct a number of new roads across the site, generally in accordance with the layouts indicated within the *Eastern Creek Precinct Plan – Stage 3* (ECP). It is intended to construct a number of roads as described below.

##### **Archbold Road**

Archbold Road is proposed to be reconstructed as a four lane Main Collector Road as identified under the ECP. Archbold Road is to be extended in a southerly direction down to the site's south-western boundary and follow the south-western and southern boundaries to the site's eastern boundary. This road will eventually be connected to the internal road system of the Eastern Creek Precinct at a time when the adjoining property is redeveloped.

##### **Collector Road**

A Collector Road is proposed to be provided which generally follows the existing dirt road providing access from the existing southern termination of Archbold Road and the existing quarry operations.

##### **Traffic Control Devices**

It is proposed to construct two roundabouts. The first is to be located at the intersection of Archbold Road and a future new Local Road. The second is to be located at the intersection of Archbold Road and the new Collector Road.

Full details of the proposed roads regarding location, alignment and design configuration are detailed in the Civil Works Report and accompany Plans prepared by Hyder Consulting.

### **2.3.3 Bulk Earthworks**

It is proposed to undertake bulk earthworks to modify the landform through cutting and filling to create useable platforms within each of the street block allotments upon which to accommodate the type of employment generating activities envisaged in the Precinct pursuant to SEPP No.59. The extent of earthworks is indicated in the Plans prepared by Hyder Consulting.

### **2.3.4 Landscaping**

Proposed landscaping will generally be limited to the new road reserves and open space areas to be constructed across the site. Details of the proposed landscaping are provided in a Landscape Report and Concept Plans prepared by Site Image - Landscape Architects.

## **2.4 Stormwater Drainage**

Stormwater details are provided within a Civil Works Report prepared by Hyder Consulting Pty Ltd. In summary, details of the proposed stormwater drainage system are as follows:

" The overall stormwater drainage system for the site will consist of three independent piped drainage systems, all have been designed in accordance with the relevant Councils Standards. Stormwater discharge from these drainage systems will pass through a series of gross pollutant traps (GPTs), and water quality ponds for treatment before entering the regional On Site Detention (OSD) basins. The stormwater will then discharge at a similar rate and location as the pre development situation.

## **2.5 Access, Internal Layout & Manoeuvring**

Access to the site will initially be via the right-of-carriageway connecting to Old Wallgrove Road or future road along that route. However, future additional access from the west via the M4 Motorway and Archbold Road is anticipated.

It is expected that the majority of trucks to be used in association with the proposed operation will be articulated with a carrying capacity of 30 tonnes.

Car parking for employees will be provided within the area designated for the MPC as shown on the DA plans. Parking for trucks, plant and machinery will be provided as shown on the plan adjoining the workshop. It is expected that this area will accommodate up to 60 trucks.

## **2.6 Operational Details**

As indicated, it is proposed that the full time extraction of the remaining resources on the site by Hanson will be phased out over the period to 2006/2007.

Once the quarrying operations have ceased on a full time basis, the rehabilitation of the site will commence. The rehabilitation works would be capable of operating 24 hours per day, 7 days a week using 3 shifts. This should enable a timetable for completion of the landfill of approximately 20 years.

A maximum of 10 employees are expected to be working on the site at any one time for the engineered landfill and on-going quarry operations. These will be multi-skilled persons capable of delivering material by truck, emplacing it by excavator, then distributing and compacting it by compactor and bulldozer.

The MPC is expected to employ approximately 50 employees on the site at any one time. These will include:

- Up to 5 mechanics;
- Up to 3 weighbridge operators;
- Up to 10 plant operators;
- Up to 5 administration staff;
- Up to 27 drivers; and
- Up to 30 subcontractors (Drivers).

Works will be carried on 24 hrs per day seven days per week.

## **2.7 Alternative Development Options**

In terms of the proposed landfill the two all-time achieve development options are to do nothing or to undertake a landfill with putrescible waste. To do nothing is not considered a viable alternative as it would not rehabilitate the land following completion of the quarrying operations and therefore would not make the land available for future employment generating development in accordance with the objectives of the relevant planning controls for the site.

Landfilling with putrescible waste is also not considered to be a desirable alternative as it would result in far greater environmental impacts in terms of groundwater leachate and odours. Additionally, the ongoing settlement of such landfill precludes future development of the land for employment generating purposes for a considerable period after the completion of landfilling operations. It would therefore involve a much longer period of time before the land could be put to an economic use.

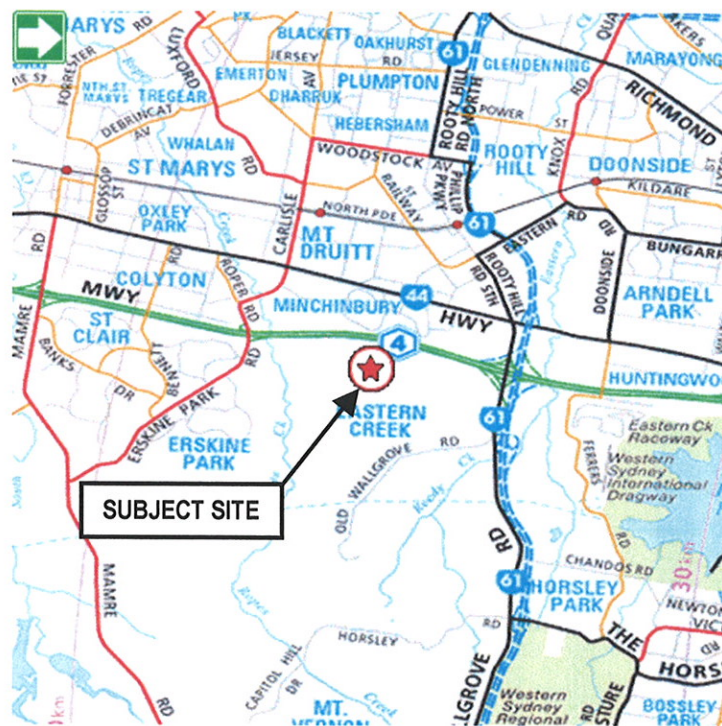
In regard to the MPC, the only real alternative would be to not provide for recycling of materials and simply deposit all material into the landfill. However, this would not eliminate the need to process much of that material to make it suitable for the engineered landfill. The do nothing option is not considered to be a preferable alternative as the recycling of waste materials is in itself an environmental benefit and the recyclable materials are of economic value. To

not capture and reuse those materials is not considered to be an environmentally appropriate option.

### 3 **SITE LOCATION**

#### 3.1 **The Site**

The Light Horse Business Centre land is located at the corner of the M4 motorway and Archbold Road, Eastern Creek. It is on the southern side of the M4 Motorway and generally, but not entirely, on the eastern side of Archbold Road. The Light Horse Business Centre land covers an area of approximately 123ha and comprises four irregularly shaped parcels of land legally described as Lot 1 in DP 400697, Lot 1 in DP 400697, Lot W in DP 419612 and Lot 10 in DP 241859. Figures 1 and 2 below illustrate the extent of the Light Horse Business Centre land and the area within the actual development site.



**Fig 1: Location Plan**

As can be seen from the plans submitted separately, the site is irregular in shape, and covers an area of approximately 123ha.

The topography of the site is substantially varied from the original landform as a result of the quarrying activities and the large masses of spoil redistributed across the site. Originally, the landform of the site contained the western end of a low ridge running east-west over the eastern portion of the site, with the land falling down to the north-west and south from approximately the middle of the site.

The site primarily contains a large quarry which is currently being used to obtain "blue metal" by Hanson (formerly Pioneer) to produce a variety of construction materials. The quarry has been in operation since the early 1950s. The quarry

is of an "open cut" design with a stepped spiralling access road around its edge down to the bottom of the quarry. The quarry is basically elliptical in shape with an approximate width (north-south) of 430m, a length (east-west) of 700m, depth of 150m and an estimated volume of 11million cubic metres. The quarry is located centrally over the eastern part of the site. Much of the spoil from the top of the quarry which did not yield productive blue metal has been stockpiled in the form of bund walls approximately 30m in height located to the east, west and northwest of the quarry. These bund walls are estimated to comprise approximately 1.5 million cubic metres of material. The circumference of the pit at the upper level is of the order of 1.5km.

Part of the quarrying and asphalt processing activities currently undertaken by Hanson are located just to the south of the quarry and extend onto the adjoining allotment to the south-east. The main refining operations of the blue metal are undertaken on this adjoining allotment which will be retained by Hanson.

Hanson's administration centre for the quarry operations is currently located in the south-eastern corner of the site and extends on to the allotment directly to the south-east and east. In addition, there is an informal unpaved parking area for trucks associated with the operation of the quarry just to the north of the administration centre. These facilities comprise:

- Weighbridge;
- Fuelling Area;
- Workshops;
- Administration Office;
- Training Centre;
- First Aid;
- Storage Sheds;
- Parking Area; and
- Amenities.

The current owner will be relocating these administration and operational activities to an area more consistent with the future operations of the site. This will ensure the following:

- That the removal and processing of the bunds and stockpiles on the western side of the Quarry and the earthworks required in connection with future development will be more efficiently addressed; and
- That the western approaches to the Quarry will be held under tighter security ensuring no unauthorised access during development activities on the remainder of the site and ensuring that Occupation Health and Safety Issues are effectively managed and controlled.

The location of the various components of the site is illustrated in the accompanying plan prepared by Joshua Farkash and Associates.

Primary access to the subject site is via a right-of-carriageway across Lot 2 in DP 644518 connecting to Old Wallgrove Road, located approximately 1.5km to the south-east of the site. Despite having a direct frontage to the M4 Motorway, no direct access to the quarry area is currently available from this road. Vehicular



access is also available to the site via Archbold Road, which crosses over the M4 and connects to the Great Western Highway to the north. Currently, this access route is not regularly used. An unsealed road provides access between the southern termination of Archbold Road and the administration centre of the quarry.



**Fig 2: Quarry viewed from the eastern side**

The Light Horse Business Centre land is predominantly covered by native grasses, with the exception of the quarry itself. A stand of Cumberland Plain Woodland is located in the north-western corner of the Light Horse Business Centre land and a combination of native trees and aggressive weeds are situated in the southern corner of the Light Horse Business Centre land within an unnamed drainage line that drain in the direction of Ropes Creek. However, neither of these areas form part of the actual development site.



**Fig 3: Spoil stock from quarry viewed from the western side**



**Fig 4: Hanson administration centre and truck parking area**



## 4 **RELEVANT PLANNING CONTROLS**

### 4.1 **Preamble**

The following Table identifies the major planning instruments and other planning documents that apply to the site and the proposed development.

<b>TABLE 1: Matters for Consideration</b>				
<b>EP &amp; A Act, 1979.</b>	<b>Matters for Consideration</b>	<b>OK</b>	<b>See Comments</b>	<b>N/A</b>
	SEPP No.55 – Remediation of Land	✓	✓	
	SEPP No.59 – Central Western Sydney Economic and Employment Area	✓	✓	
	SEPP (Major Projects) 2005	✓	✓	
"	SREP No.20 – Hawkesbury-Nepean River (No.2-1997)	✓	✓	
	SREP No.9 – Extractive Industry (No.2 1995)	✓	✓	
	Any Draft EPIs			✓
	Any DCPs			✓
	Any other prescribed matter:- Government Coastal Policy; AS 2601-1991: Demolition of structures.			✓ ✓

The matters identified in the above Table as requiring specific comment are discussed below. The primary statutory document that relates to the subject site and the proposed development is the *State Environmental Planning Policy (SEPP) No.59 – Central Western Sydney Economic and Employment Area*. The main non-statutory plan is the *Eastern Creek Precinct Plan - Stage 3*. The relevant provisions of these documents and other relevant planning controls are summarised below and the proposal's compliance with them assessed.

#### 4.1.1 **SEPP No.55 – Remediation of Land**

This SEPP was gazetted on 28 August 1989 and applies to the whole State. It introduces planning controls for the remediation of contaminated land and requires an investigation to be made if land contamination is suspected.

A Phase 1 Environmental Site Assessment prepared for Lot 2 in DP262213 by CH2M HILL Australia Pty Ltd (October 2004) identified the following potential sources of contamination and environmental risk on the site:

- Illegal tipping of waste on the site around Archbold Road;
- Drainage of semi volatile aromatic compounds, PAHs, TPH and phenols to soil and/or groundwater in unsealed areas;

- Secondary sources of contamination from quarrying activities such as machinery operations and haulage;
- Burial of asbestos on site; and
- Buildings containing asbestos.

The site contamination investigations concluded that the site poses a low potential for residual soil contamination to be present.

The proposed development merely facilitates future use of the site generally for employment generating industrial purposes, which are less sensitive to impacts from any previous contamination. Accordingly, any required additional investigations or required remediation can be undertaken as part of the landfill operations and quarry rehabilitation and are therefore may be dealt with by appropriate conditions of consent.

#### **4.1.2 SEPP No. 59 – Central Western Sydney Economic and Employment Area**

State Environmental Planning Policy (SEPP) No.59 – Central Western Sydney Economic and Employment Area was gazetted on 19 February, 1999 and applies to the subject site. The SEPP contains a series of objectives and planning controls.

##### **Aims and Objectives**

The specific environmental planning aims and objectives of the SEPP are stated in clause 2, inter alia:

- " This Policy aims:
- (a) to rezone certain land for urban development, and
  - (b) to co-ordinate the planning and development of the land to which this Policy applies by:
    - (i) establishing a clear set of guiding principles for the development of land, and
    - (ii) requiring the preparation of precinct plans that will provide detailed planning controls, and
    - (iii) providing for the co-ordinated provision of infrastructure services and the staging of development, and
  - (c) to promote economic development and the creation of employment in Western Sydney by providing for the development of major warehousing, industrial, high technology, research or ancillary facilities with good access to the existing and proposed road freight network, including the M4 motorway and the Western Sydney Orbital, and
  - (d) to provide for residential development on suitable parts of the land as identified in the Policy to assist in accommodating the projected population growth of Western Sydney in a manner consistent with the principles of the compact city as described in *Cities for the 21st Century*, published by the Department of Planning in January 1995, and
  - (e) to provide for the staged optimum extraction of resources from existing quarries, and
  - (f) to encourage the staged rehabilitation and construction of existing quarries to facilitate their longer term use as employment lands, and
  - (g) to provide for the optimal environmental and planning outcomes for the land to which this Policy applies by:

- (i) conserving those areas that have a high biodiversity or heritage, scenic or cultural value and, in particular, areas of remnant vegetation, and
- (ii) helping to achieve the goals set out in *Action for Air, the New South Wales Government's 25 year Air Quality Management Plan*, published by the New South Wales Government in March 1998, by containing the per capita growth in VKT (vehicle kilometres travelled) by achieving higher than normal public transport usage, and
- (iii) implementing the principles of good urban design, and
- (iv) ensuring that extractive industries are carried out in an environmentally acceptable manner."

The proposed development is considered to be entirely consistent with the relevant aims and objectives of the Policy, particularly by rehabilitating the existing quarry on the site to prepare for its future use as employment lands.

### **Matters for Consideration**

Clause 10 of the SEPP contains a number of matters to be considered in the assessment of any proposed development. The relevant matters have been addressed in Table 2 below.

<b>TABLE 2: Matters for Consideration</b>		
<b>Consideration</b>	<b>Comment</b>	<b>Complies</b>
<b>Economic development and employment</b> (a) the contribution the development makes to the economic development and the number and diversity of jobs in Central Western Sydney, (b) the range of lot sizes and resulting ability to accommodate a wide range of employment-generating development including those uses which require large sites such as major distribution sites,	The proposed development will ultimately recontour the topography of the site to enable the creation of suitably sized parcels of land to accommodate the types of development envisaged by the SEPP.	✓
<b>Servicing</b> (c) the timing, location and design of the development having regard to the orderly provision of infrastructure and services,	The site will be appropriately rehabilitated to enable the provision of suitable infrastructure to cater for future development within the Precinct.	✓
<b>Extraction and rehabilitation</b> (d) the remaining resources which are of a high quality, regionally significant and identified in <u>Sydney Regional Environmental Plan No 9—Extractive Industry</u> , should be extracted while economically viable,	The quarry is identified in SREP 9. Current quarrying operations will continue until approximately November 2006 when it is no longer economically viable to operate the quarry.	✓
(e) there should be an orderly and co-ordinated sequence of extraction and rehabilitation to achieve the progressive construction of landforms that are suitable for development as employment lands,	Upon ceasing of the quarrying, it is proposed to commence the land filling to rehabilitate the site for future development.	✓

TABLE 2: Matters for Consideration		
Consideration	Comment	Complies
	Further, an Extraction and Rehabilitation Plan has been prepared and accompanies this application.	
<b>Housing</b> (f) housing choice will be achieved by a wide range of housing types and lot sizes, with an overall density within a Precinct of at least 15 dwellings per hectare to meet the principles of the compact city as described in <i>Cities for the 21st Century</i> , published by the Department of Planning in January 1995,	No housing is proposed as part of the development or envisaged in the future in accordance with the land use provisions of the SEPP.	N/A
<b>Environment</b> (g) development should be consistent with the principles of ecologically sustainable development which requires an active approach to anticipating and preventing damage to the environment, and where possible, ensuring that developments are planned in a way that enhances the environment,	The proposed development does not remove or threaten any significant flora or fauna habitats on the site. Appropriate stormwater management practices will be incorporated to minimise any impacts upon water quality.	✓
(h) development should be consistent with <i>Action for Air, the New South Wales Government's 25 year Air Quality Management Plan</i> , published by the New South Wales Government in March 1998, including all aspects of air quality, from assessing emissions from a development to transport and land use considerations,	Refer to Hyder Consulting report.	✓
(i) development should be consistent with the principles of total water cycle management, including minimising total water usage, minimising waste water requiring treatment and disposal, minimising stormwater impacts on the environment, and maximising water retention and reuse,	Refer to Water management report – It is proposed to reuse water from the sedimentation ponds on the site to provide dust suppression.	✓
(j) development should be consistent with the principles of waste minimisation as set out in <i>A Guide to the Waste Minimisation and Management Regulation</i> , published by the Environment Protection Authority in 1996, and should ensure that waste is minimised through re-use, recycling and reprocessing, with disposal being the last resort option,	The proposal in itself provides a waste minimisation end result for many other developments through the Sydney Metropolitan area, by providing the opportunity to utilise excess soils and materials from other development sites in the rehabilitation of the site.	✓

TABLE 2: Matters for Consideration		
Consideration	Comment	Complies
(k) development should be planned to achieve maximum energy efficiency through such measures as building location, design and materials use, the selection of energy and water efficient building services, equipment and appliances,	N/A	N/A
<b>Heritage conservation</b>		
(l) the conservation of items of heritage significance identified in this Policy or any other environmental planning instruments or subject to an order under the <u>Heritage Act 1977</u> ,	There are no heritage items located on the subject site.	N/A
(m) the conservation of significant bushland and other natural features,	There is no significant bushland or other natural features on the part of the site to be land filled.	✓
(n) development should be planned to minimise impacts on areas of high biodiversity or Aboriginal heritage significance and should seek to enhance the values of these areas,	The proposed development does not affect any areas of high or moderate sensitivity for the existence of aboriginal heritage as identified within the Precinct Plan.	✓
<b>Cultural landscape and open space</b>		
(o) the suitability of the site or part of the site for open space that will enhance and link the regional open space and special uses corridor and provide for the needs of the local community,	Provision of local open space on the site will be considered during the future subdivision of the site for employment purposes upon completion of the engineered landfill.	N/A
(p) the protection and improvement of the cultural landscape particularly that surrounding St Bartholomews Church and Prospect Reservoir,	The site is not located near these items.	N/A
<b>Transport</b>		
(q) the range of permissible land uses, the design and layout of the site, and connections to existing transport networks should minimise vehicle kilometres travelled (VKT) while recognising the freight and transport requirements of the industry,	The proposed development will utilise existing transport connections to the site. Improved vehicular access to the site may be provided at a later date during the redevelopment of the western portions of the site as discussed elsewhere in this Statement.	✓
(r) development should provide for users of all modes of transport, including public transport, cycling and walking, with a recognition of the need to integrate the development into the surrounding network of each mode,	There is currently insufficient infrastructure in the locality to enable the promotion of alternative modes of transport to the site.	N/A

TABLE 2: Matters for Consideration		
Consideration	Comment	Complies
(s) the identification of freight links through the Greystanes Precinct from the land zoned "Employment" at Wetherill Park to the M4,	No new transport links are proposed, nor are required as a consequence of the proposed development.	N/A
(t) the identification of links to the Transitway identified in <i>Action for Transport 2010, an Integrated Transport Plan for Sydney</i> published by the NSW Government in November 1998,	No new links are proposed	N/A
<b>Urban design</b>		
(u) development should ensure that the environmental and social quality of existing and future residential areas are safeguarded and that, in particular, noise and vibration from quarry operations is minimised,	A 30 metre wide landscape buffer is to be provided around the top rim of the quarry to provide screening of the proposed filling operations.	✓
(v) development should be designed and located to ensure the best possible urban design outcomes including landscape quality and visual character,	As indicated the proposed landscape buffer around the top rim of the quarry will help screen the proposed filling operations on the site.	✓
(w) the scale and character of any development derived from an analysis of the site, having particular regard for its character when viewed from the M4, or the environs of Prospect Reservoir,	Refer to above.	✓
<b>Community services</b>		
(x) development of the land will integrate community services with land use planning,	This issue will be addressed in the subsequent redevelopment of the site once the former quarry has been appropriately rehabilitated.	N/A
(y) development of the land is to result in an attractive and safe built environment which satisfies a diverse range of community needs,	The proposal will suitably prepare the site for its future use for employment generating activities in accordance with the SEPP.	N/A
(z) the full range of human services and community facilities infrastructure appropriate to the changing needs of the community will be provided in a timely manner,	Additional services will not be required until such time as the site is completely rehabilitated.	N/A
(aa) the amenity of the region will be promoted through the provision of on-site services and facilities, and through complementing or augmenting existing service networks,	Refer to above.	N/A
(bb) equitable access to services and facilities will be promoted for all groups and individuals in the community,	Additional services will not be required until such a time as the former quarry has been appropriately rehabilitated and the site is	N/A

TABLE 2: Matters for Consideration		
Consideration	Comment	Complies
	ready for redevelopment.	
(cc) development will integrate the new community with existing adjoining communities,	The proposed works will enable the site to be appropriately connected with future adjoining communities by generally reinstating the existing land form.	✓
(dd) community participation will be encouraged in the identification of community services and facility needs.	No community services are proposed.	N/A

### Zoning and Landuse

The site is zoned Employment under the provisions of the SEPP. Clause 22 of the SEPP sets out the objectives and development control table for development within the Employment Zone. The Clause states inter alia:

- " Employment Zone
- 1 Objectives**
- The zone objectives are:
- (a) to facilitate employment-generating industrial, manufacturing, warehousing, high technology, storage or research purposes, including ancillary office space, that are consistent with a Precinct plan applying to the land, and
  - (b) to ensure that development in Central Western Sydney is of a high standard and that the development:
    - (i) incorporates best practice environmental management techniques and adopts all measures necessary to protect the environment of the zone by reason of:
      - emissions (noise, air, liquids or solid wastes), or
      - environmental risks (including potentially hazardous and offensive industries), and
    - (ii) enhances the amenity of Central Western Sydney by including high quality landscaping, signage and fencing, adequate building setbacks, high quality external finishes and is compatible with the scale and character of existing development in the area, and
    - (iii) encourages an efficient use of resources in the construction and operation of the development, and
    - (iv) enhances the biodiversity of the region by the retention of significant bushland communities or through the regeneration of bushland communities as part of landscaping, and
    - (v) enhances or does not degrade the water quality of natural waterways and their riparian zones, and
    - (vi) enhances and maintains significant Aboriginal heritage values, and
    - (vii) in so far as it is new development permitted by this Policy, does not prejudice any existing or proposed commercial or industrial centres, and
  - (c) to allow for a variety of small scale, local services through the provision of commercial, retail and community facilities (such as child care facilities) and other development, but only where it is:

- (i) ancillary to the development of land within this zone for a purpose specified in paragraph (a) of these objectives, or
  - (ii) to provide personal services and community facilities to persons occupied or employed in activities in this zone (or for the benefit of the local neighbourhood), and
  - (iii) unlikely to prejudice the viability of existing activities and is not prejudicial to the objectives of this zone, and
- (d) to allow for local open space that is accessible and well located, that promotes the use and enjoyment of local open space for both residents and the workforce, that may include elements of the natural environment, and that provides for active and passive recreation.

**2 Development that does not require consent**

Development:

- (a) for the purpose of public utility undertakings (including rail or road, supply of water, electricity, or gas, or provision of sewerage or drainage services), or
- (b) that:
  - (i) is of minimal environmental impact, and
  - (ii) is specified as exempt development in Schedule 2.

**3 Development that requires consent**

Development:

- (a) for the purpose of an industry listed in Schedule 3 (Designated development) to the Environmental Planning and Assessment Regulation 1994, or
- (b) that is integrated development, or
- (c) for the purpose of potentially hazardous or potentially offensive industry, or
- (d) for the purpose of any other employment-generating development that meets the objectives for the zone, other than development that does not require consent, or
- (e) for the purpose of remediation and rehabilitation, or
- (f) for the purpose of alterations and relocation of existing quarrying activities, or
- (g) that is specified under the heading "Use" in Schedule 3 and that satisfies the requirements specified opposite the development under the heading "Requirement" in that Schedule.

**4 Prohibited development**

Development other than that specified in paragraph 2 or 3.

The proposed development involves a waste management facility and an engineered landfill for the purposes of "rehabilitation" of the site to enable the future redevelopment of the land for employment generating activities. It also involves a subdivision of part of the site. These uses are permissible with development consent and are considered to be consistent with all relevant objectives of the zone.

**Consideration of Precinct Plan**

Clause 25 of the SEPP requires a consent authority to take into consideration any Precinct Plan that applies to the determination of a development application in respect of land within a Precinct.

In addition, pursuant to clause 271(1) of the *Environmental Planning and Assessment Regulation 2000* (the Regulation), a person cannot apply to a consent authority for consent to carry out development on land zoned "Employment" under SEPP 59 unless the Minister has, in accordance with clause 11 of SEPP 59, declared the land to be, or to be part of, a release area. On 25



February 2003, in accordance with clause 11 of SEPP 59, the Minister declared the Eastern Creek Precinct to be a release area under the Policy.

Once the Minister declares the land to be a release area, clause 12 of the SEPP requires a Precinct Plan and Contributions Plan under section 94 of the Act to be prepared for that land.

The site is subject to the *Eastern Creek Precinct Plan - Stage 3* which was adopted by Blacktown Council on the 7 December 2005 and came into force on the 14 December 2005. The proposed development has been assessed against this Precinct Plan at Section 4.2.4 of this Statement.

Currently, there is no relevant Section 94 Contributions Plan for the site. However, clause 271(2)(c) of the Regulation states that the Precinct Plan and Contributions Plan may be dispensed with if the developer has entered into an agreement with the consent authority that makes adequate provision with respect to the matters that may be the subject of the two plans. Accordingly, an agreement between the Applicant and the consent authority must be in place before the development application may be determined. A Developer Agreement is being prepared to address this issue.

#### ***Tree preservation***

Clause 29 of the SEPP relates to tree preservation and states that a person must not ringbark, cut down, lop, top, remove, injure or wilfully destroy any tree within a Precinct except with the consent of the consent authority.

The vast majority of trees on the site are located within the proposed conservation area. Consent is requested for the removal of several trees from the site identified on the accompanying plans.

#### ***Use of former quarry at Wallgrove as non-putrescible waste facility***

Clause 31A relates to reuse of the former quarry for a "non-putrescible waste facility". The clause states inter alia:

- "
- (1) This clause applies to certain land at Wallgrove, being the land comprised in Lot 2, DP 262213, Lot 1, DP 400697, Lot W, DP 419612, Lot 10, DP 241859 and Lot 11, DP 558723.
  - (2) Despite the other provisions of this Policy, the land to which this clause applies may be used, with the consent of the consent authority, for the purpose of a waste facility for non-putrescible material."

As previously, indicated the proposed development is characterised as a non-putrescible waste management facility and accordingly is entirely consistent with this clause of the LEP.

There are no other provisions of the SEPP that are relevant to the current proposal.

#### **4.1.3 Eastern Creek Precinct Plan**

The *Eastern Creek Precinct Plan - Stage 3* (ECP) was adopted by Blacktown Council on the 7 December 2005 and came into force on the 14 December 2005. The relevant sections of the ECP have been addressed as follows:

##### ***Creating a Sense of Place***

Section 2.3 of the ECP contains a number of objectives relating to the elements which contribute to the character of the area and the sense of place. The objectives are stated as follows:

- (a) retaining significant natural areas and tree canopy surrounding buildings;
- (b) creating buildings nestled into the landscape;
- (c) keeping high points within the Precinct vegetated;
- (d) retaining heritage items and providing interpretation of these elements so that the new businesses can gain a sense of the place prior to the current use. These interpretative elements are particularly important in the public domain areas;
- (e) The palette of furniture and fixtures also plays an important part in creating and generating the sense of place. Integral to this is street and wayfinding signage, shelters, seats, bins etc, all of which need to be carefully selected to site within the landscape. In some cases a purpose designed palette that reflects the local elements such as undulating topography and vegetation may be appropriate;
- (f) Interpretative and explanatory information regarding significant natural areas is of importance and should be incorporated into the trails and other public domain areas;
- (g) Trim trail that provides an opportunity for workers to not only walk a designated route but also to undertake specific exercise along the way. The design of the trim trail equipment provides an opportunity for incorporation of design elements which are reflective of the existing local character; and
- (h) The water courses that run through the Precinct are an important element in the existing character of the site. Water and access to it including the creeks can be an important element to the future character.

The proposed development is considered to be consistent with the relevant objectives by reinstating the general natural land form through filling and rehabilitation of the former quarry.

##### ***Employment and Economic Growth***

Section 3.4 of the ECP contains a number of objectives relating to projected employment and economic growth which are stated as follows:

- (a) Establish a high quality industrial Precinct that provides diversity in employment opportunities and economic development to benefit Blacktown and Central Western Sydney.
- (b) Provide a range of development consistent with the provisions of SEPP 59 and having regard to the location of the site in close proximity to the junction of the M4 Motorway and the M7 Motorway.
- (c) Provide for a range of community services that service the daily convenience needs of the local workforce and visitors, and the needs of local businesses and activities.
- (d) Enhance the skill of the local workforce through the provision of appropriate facilities for the training of apprentices, and ongoing training and development.

- (e) Contribute to the increased levels of skill matching with the local workforce.
- (f) Development should aim to achieve a minimum employment density target of 45 jobs per in order to achieve the overall projected on-site employment forecast of approximately 20,000 jobs for the whole Precinct.

The proposed development helps to achieve these objectives by preparing the site for future employment generating developments. Furthermore, the proposal provides a similar number of jobs involving similar skill sets to that currently provided by the quarry on the site.

Sections 4-14 of the ECPP contain provisions relating to utility services, stormwater management, extraction and rehabilitation, environmental management, biodiversity, heritage, traffic and transport, urban design, community services, open space and landscaping. Each of the relevant sections of the ECPP has been addressed in the preparation of the proposed development. In essence, the proposal is considered to be generally consistent with the relevant provisions.

#### **4.1.4 SREP No.9 – Extractive Industry**

Sydney REP No.9 – Extractive Industry (No.2-1995) was gazetted on 15 September, 1995. The aims and objectives of the SREP are set out in clause and state, inter alia:

- “
- (a) to facilitate the development of extractive resources in proximity to the population of the Sydney Metropolitan Area by identifying land which contains extractive material of regional significance, and
  - (b) to permit, with the consent of the council, development for the purpose of extractive industries on land described in Schedule 1 or 2, and
  - (c) to ensure consideration is given to the impact of encroaching development on the ability of extractive industries to realise their full potential, and
  - (d) to promote the carrying out of development for the purpose of extractive industries in an environmentally acceptable manner, and
  - (e) to prohibit development for the purpose of extractive industry on the land described in Schedule 3 in the Macdonald, Colo, Hawkesbury and Nepean Rivers, being land which is environmentally sensitive.”

The plan applies to the local government area of Blacktown, amongst others, and therefore applies to the subject site. The main implication of the SREP arises from clause 8 which requires consultation with the Department of Mineral Resources in respect of the subject development application.

It is anticipated that the necessary referral and consultation will occur as part of the development application assessment process.

Rehabilitation of the quarry in the manner proposed and described in this Statement uniquely permits compliance with the SEPP objectives and a specific objective of SEPP 59 which states, inter alia:

- “
- to require that remaining resources which are of a high quality, regionally significant and identified in Sydney Regional Environment Plan No 9- Extractive Industry to be extracted while economically viable.

Were it not for this proposal to achieve progressive filling using engineered fill materials, the blue metal rock which forms the spiral road from the surface level to the base of the quarry would be sterilized.

As previously indicated, the existing quarry is approaching the end of its economically viability and accordingly the ceasing of full time quarrying activities and undertaking the proposed rehabilitation works is considered acceptable in the circumstances.

#### 4.1.5 SREP No.20 – Hawkesbury-Nepean River (No.2-1997)

Sydney Regional Environmental Plan No.20 – Hawkesbury-Nepean River (No.2-1997) was gazetted on 7 November, 1997. The plan aims to protect the environment of the Hawkesbury-Nepean River system by ensuring that the impacts of future land uses are considered in a regional context.

Clause 4 of the SREP contains provision which state that a development is not be granted consent unless the consent authority has considered the general and specific matters for consideration of the SREP. The general and specific matters are addressed in Table 3 below.

TABLE 3: Matters for Consideration		
Consideration	Comment	Complies
<b>General Planning Considerations</b>		
(a) the aim of this plan, and	The aims of the plan have been addressed above.	✓
(b) the strategies listed in the Action Plan of the Hawkesbury-Nepean Environmental Planning Strategy, and	As discussed throughout this Statement, the proposal is considered to be consistent with the relevant strategies by incorporating measures to ensure that any potential impacts on the ecological quality of the River and its surrounds are minimised.	✓
(c) whether there are any feasible alternatives to the development or other proposal concerned, and	The site has been zoned pursuant to SEPP 59 for employment generating development and rehabilitation of the quarry is consistent with that SEPP.	✓
(d) the relationship between the different impacts of the development or other proposal and the environment, and how those impacts will be addressed and monitored.	The various anticipated impacts of the proposal and how they will be monitored have been addressed throughout this Statement and supporting documentation.	✓
<b>Specific planning policies and recommended strategies</b>		
<b>Total catchment management</b> Total catchment management is to be integrated with environmental planning for the catchment.	The proposed development involves the installation and use of a number of water and sediment management structures to minimise water quality impacts and the effects of erosion and sedimentation during rehabilitation works. Details of	✓

TABLE 3: Matters for Consideration		
Consideration	Comment	Complies
	these initiatives are further explained within the Extraction and Rehabilitation Plan prepared by Hyder Consulting.	
<b>Environmentally sensitive areas</b> The environmental quality of environmentally sensitive areas must be protected and enhanced through careful control of future land use changes and through management and (where necessary) remediation of existing uses.	As indicated in the ECPP, the site contains an area of significant vegetation and a riparian corridor. However, the proposal does not occur in the vicinity of either of these identified areas nor will it impact upon their retention and protection.	✓
<b>Water quality</b> Future development must not prejudice the achievement of the goals of use of the river for primary contact recreation (being recreational activities involving direct water contact, such as swimming) and aquatic ecosystem protection in the river system. If the quality of the receiving waters does not currently allow these uses, the current water quality must be maintained, or improved, so as not to jeopardise the achievement of the goals in the future. When water quality goals are set by the Government these are to be the goals to be achieved under this policy.	The majority of rainfall and run-off in the quarry pit area will flow directly into the void. The minor percentage of stormwater that does not run into the void will be directed into the proposed quarry surrounds drainage networks and sediment basins.  Water and sediment management structures will be used to minimise water quality impacts and the effects of erosion and sedimentation during rehabilitation works as detailed in the Extraction and rehabilitation Plan.	✓
<b>Water quantity</b> Aquatic ecosystems must not be adversely affected by development which changes the flow characteristics of surface or groundwater in the catchment.	The level of water expelled from the site as a result of the proposed development will be largely identical to that currently occurring.  Opportunities exist to reuse water on-site from sedimentation ponds on the site for dust suppression, reducing the level of water expelled from the site.  Furthermore, the proposed rehabilitation works will help to reinstate the water table to that existing prior to the commencement of quarrying operations.	✓
<b>Cultural heritage</b> The importance of the river in contributing to the significance of items and places of cultural heritage significance should be recognised, and these items and places should be protected and sensitively managed and, if appropriate, enhanced.	The site has no significance to the cultural heritage of the River.	✓
<b>Flora and fauna</b> Manage flora and fauna communities so that the diversity of species and genetics within the catchment is conserved and enhanced.	As indicated, the site contains a remnant area of Cumberland Plain Forest, with is identified as a threatened species. The proposed land filling and rehabilitation	✓

TABLE 3: Matters for Consideration		
Consideration	Comment	Complies
	works are not located in, adjacent to or in the vicinity of this ecological community. Accordingly, this identified area will be retained and preserved.  Proposed buildings and structures are to be located in generally cleared areas, which minimises the disturbance on existing vegetation.  A landscaped buffer is to be provided around the landfill & MPC to help screen the proposed activities. The buffer is to consist of a mixture of native and indigenous plant species.	
<b>Riverine scenic quality</b> The scenic quality of the riverine corridor must be protected.	The subject site is located approximately 14km away from the foreshores of the Nepean River and can not be seen from the River, due to the screening of the site by the prevailing topography of the land.	✓
<b>Agriculture/aquaculture and fishing</b> Agriculture must be planned and managed to minimise adverse environmental impacts and be protected from adverse impacts of other forms of development.	The site has not been used for agricultural activities for a number of years. Notwithstanding, the land is zoned for industrial purposes.	N/A
<b>Rural residential development</b> Rural residential development should not reduce agricultural sustainability, contribute to urban sprawl, or have adverse environmental impacts (particularly on the water cycle or on flora or fauna).	The land is zoned for industrial purposes.	N/A
<b>Urban development</b> All potential adverse environmental impacts of urban development must be assessed and controlled.	The proposed development does not intend to intensify the use of the land and accordingly, there is unlikely to be any potential adverse environmental impacts. Notwithstanding, measures have been taken to minimise any adverse affects as a result of the proposed development.	✓
<b>Recreation and Tourism</b> The value of the riverine corridor as a significant recreational and tourist asset must be protected.	As indicated, the proposed development is located approximately 14km away from the foreshores of the Nepean River and accordingly will not impact upon the recreational or tourist use of the river.	✓

TABLE 3: Matters for Consideration		
Consideration	Comment	Complies
<b>Metropolitan Strategy</b> Development should complement the vision, goal, key principles and action plan of the Metropolitan Strategy.	The "City of Cities – Metropolitan Strategy" identifies the subject site as being part of a future employment generating hub. Accordingly, the proposed development will consistent with this vision by prepare the site for its future redevelopment for employment generating activities.	✓

Clause 11 of the SREP contains development controls for a variety of development types, one of which includes the "filling of land". The SREP states that where the filling of land is greater than 1 metre in depth or covers an area greater than 100m<sup>2</sup>, it requires development consent. Accordingly, as the proposed development involves the filling of land well in excess of the depth and area thresholds, consent is sought to enable the filling of land.

## **5 DESCRIPTION OF EXISTING ENVIRONMENT**

### **5.1 *Character of the Locality***

The Light Horse Business Centre land is located near the north-western corner of the Eastern Creek Business Precinct, which is generally bounded by the M4 Motorway to the north, the M7 Motorway to the east, the water supply pipeline between Warragamba Dam and Prospect Reservoir to the south and Ropes Creek and regional electricity transmission lines to the west. The character of this precinct is currently undergoing transition from traditional agricultural and quarrying activities to a modern industrial business park reflecting the policies implemented by the State government to create a major employment hub in the western suburbs of Sydney. This new business park is designed to take full advantage of regional transport networks including the M4 and M7 Motorway networks. In addition, the area is also characterised by some low density residential development on the opposite side of the M4 Motorway to the north, and open space and agricultural activities to the east and west.

### **5.2 *Existing Site Uses and Licences***

The existing activities on the site are undertaken in accordance with current Environment Protection Authority, now Department of Environment and Conservation (DEC) Licence Nos. 494 and 5073. The DEC licenses are issued under the *Protection of the Environment Operations Act* and are currently held by:

- Hanson Pty Ltd - Licence No. 5073
- Pioneer Road Services Licence No. 494

The Licenses extend over four parcels of land legally identified as Lot 10 in DP 241859, Lot 2 in DP 262213, Lot 1 in DP 400697 and Lot W in DP 419612, at Archbold Road, Eastern Creek. Light Horse Business Centre (or its nominee Eastern Creek Recyclers Pty Ltd) as the occupier of the land are entitled to the transfer to it of these DEC licenses.

Hanson (previously known as Pioneer) has occupied the land and has carried on the commercial activities permitted under the licenses for approximately 50 years. Copies of the Licenses are submitted separately.

**Licence 494** permits as Fee Based activities:

- Bitumen Pre Mix or Hot Mix Production, and
- Crushing Grinding and Separating Works.

**Licence 5073** permits the following Scheduled Activities:

- Concrete Works;
- Crushing Grinding or Separating works;
- Extractive Industries; and
- Waste Facilities- Store/ Transfer/ Separate.



Fee based activities also included are:

- Concrete Batching; and
- Hard Rock Gravel Quarrying.

**Licence 5073** permits the inert and solid waste listed below to be stored or transferred, recovered by way of separating or processing at the premises:

- Virgin Excavated Natural Material (VENM);
- Building and demolition waste;
- Asphalt waste;
- Used rejected or unwanted tyres (including shredded tyres or tyre pieces);
- Municipal Waste;
- Non chemical waste generated from manufacturing and services.

The new occupier of the land is carrying on the same activities as its predecessor Licence holder. Under the Licences, inert and or solid waste received at or generated at the premises is assessed and classified in accordance with the *EPA Environmental Guidelines: Assessment, Classification and Management of Liquid and Non Liquid Wastes* issued by the former EPA.

Solid waste may include soils in which there is a level of contaminant such as asbestos or other chemicals specified in Table A3 and A4 of *EPA Environmental Guidelines: Assessment, Classification and Management of Liquid and Non Liquid Wastes*, the presence of which requires the classification of the soil as 'solid waste'.

The License Holder's activities under the DEC Licenses are consistent with the Quarry Rehabilitation proposal which is set out in a separate application for that activity.

### **5.3 Surrounding Development**

To the north of the Light Horse Business Centre land is the M4 Motorway which is the main east-west vehicle route between the Sydney CBD and the central regions of NSW. Further to the north, beyond the M4 Motorway is the residential suburb of Minchinbury. The residential suburb primarily consists of low density single and semi detached dwellings of brick veneer and tiled roof construction.

Directly to the east of the site is a vacant cleared parcel of land formerly used for agricultural grazing purposes and a large area of woodland. Further to the east are the Minchinbury Water Reservoir, the former Wonderland Sydney (also known as Australia's Wonderland) entertainment facility, Wallgrove Road and the recently completed M7 Motorway. The M7 serves as a western orbital arterial road as part of the National Highway system. Further to the east is the Eastern Creek recreation corridor.

Directly to the south-east of the site is situated the existing operational infrastructure of the Hanson quarrying and asphalt operations. These operations primarily consist of the crushing, processing and storage of blue metal materials, rock and concrete and the processing of asphalt. Further to the south lie open

vacant lands formerly used for agricultural grazing purposes. This land to the north, south-east and south is also currently earmarked for future redevelopment as part of the Eastern Creek Business Park.

Directly to the south-west and west of the Light Horse Business Centre land are large tracts of vacant land located on either side of Ropes Creek and used for agricultural purposes, particularly grazing. In addition, this area contains a number of regional high voltage electricity transmission lines.

## **6 DISCUSSION OF KEY ISSUES**

### **6.1 *Impacts on Natural & Built Environment***

#### **6.1.1 *Topography & Scenic Impacts***

As indicated, the topography of the site which is affected by the proposed works is substantially modified. The proposed filling of the quarry is expected to have a significant visual impact as the site transforms from a deep void into a raised surface area for future employment lands as envisaged by SEPP 59. With the filling of the void the site topography will revert more closely to its original landform. However, this may be further modified by the development works in preparation for industrial construction.

The proposed MPC generally involves only a limited number of buildings and is located so as not to be highly visible. The buildings, stockpiles and other operational areas have been located within a vegetation buffer to further reduce the visual impacts of the proposed works by providing additional screening.

Accordingly, the scenic impact and the impact of the development on the topography of the locality are considered to be appropriate and acceptable.

#### **6.1.2 *Air Quality & Micro-climate Impacts***

There is potential for dust generation during the transportation of fill material into and within the site, the processing of fill material and the emplacement / compaction of fill material. The quantity of dust likely to be generated is dependent on the particle size distribution and moisture content of the various fill materials and prevailing weather conditions.

Dust management will be implemented to control the amount of dust generated from the proposed works to ensure minimal impacts occur on the air quality of the surrounding area. The extent of dust suppression measures are detailed in the Extraction and Rehabilitation Plan prepared by Hyder Consulting.

#### **6.1.3 *Energy Impacts***

The proposed development in its own right is an energy intensive development. However, the life expectancy of the proposed works will be limited once the quarry has been filled to its required level. Notwithstanding, the proposed equipment to be used in the land filling, including building structures if transportable, will be able to be relocated to other sites for reuse minimising energy consumption for the manufacture of new equipment and structures.

#### **6.1.4 Water Quality Impacts**

##### **Stormwater**

The overall stormwater drainage system for the site will consist of three independent piped drainage systems. All have been designed in accordance with the relevant Council Standards. Stormwater discharge from these drainage systems will pass through a series of gross pollutant traps (GPTs) and water quality ponds for treatment before entering the regional On Site Detention (OSD) basins. The stormwater will then discharge at a similar rate and location as the pre development situation. Further details are provided in the Civil Works Report by Hyder Consulting.

##### **Groundwater & Salinity**

A detailed Groundwater and Salinity Assessment was undertaken by Ian Grey Groundwater Consulting Pty Ltd. The degree of impact on ground water and salinity from existing operations on the site were determined as follows:

“ Groundwater inflow to the quarry is very low, with the estimate of 125 kL/day likely to include rainfall runoff and recirculation. Pumping from the quarry over many years has resulting in substantial depressurisation of the surrounding groundwater systems. The extent of drawdown is expected to be localised in the shallow groundwater system, and most extensive in the deep aquifers. If pumping ceases, groundwater levels will rebound, eventually returning to close to natural levels of around 50mAHD or greater over a timescale of tens of years or more.

The quarry represents a very low risk site for landfill in terms of potential environmental impacts, because of the low permeability of the strata; the strong inward hydraulic gradient; and the low groundwater inflow rate. It is therefore considered highly suited to rehabilitation by controlled filling, providing that appropriate management and control measures are implemented, including collection and pumping of groundwater seepage and rainfall infiltration. Provision of a low permeability barrier or landfill liner is not considered necessary.

The report then went on to provide a number of recommendations as follows:

“ Provision of a low permeability barrier across the base or sides of the quarry is not considered necessary. A water interception and collection system in the base of the quarry is required, to allow control of water accumulation within the quarry during filling. This should comprise a basal drainage blanket with sumps and risers. Surface runoff should be collected.

Water levels in the base of the quarry should be maintained as required operationally, either a few metres below the fill surface, or at a lower level to provide buffering storage. Pumped water is expected to be suitable for on-site reuse, but treatment is likely to be required prior to discharge to surface waters.

Control of water levels within the quarry will allow management of groundwater levels in the quarry and surrounding strata, if required. The nature of the fill to be used for rehabilitation will be carefully controlled. No further mitigation measures are considered necessary to protect groundwater.

Some additional investigation groundwater conditions is required to determine baseline conditions, and ongoing monitoring will be required during rehabilitation. Drilling of at least 3 multi-level piezometers is recommended around the quarry, followed by monitoring of these and pumped volumes. Numerical modelling of the

local groundwater system and repressurisation is also recommended, to allow prediction of final groundwater levels and flow regime."

These measures are to be incorporated in the proposed development. Accordingly, the proposal is unlikely to have any adverse impact in terms of water quality.

#### **6.1.5 Flora & Fauna Impacts**

The potential impact on site flora and fauna and endangered ecological communities has been assessed in the Guiding Ecological Principles and Constraints Report prepared by Keystone Ecological. The assessment revealed:

" ... Realised and potential habitat of a number of threatened species and endangered ecological communities were found to occur on the subject site. These areas of ecological value are restricted to patches of remnant vegetation in the northern and southern parts of the site.

The value of the large remnant of Cumberland Plain Woodland in the north western corner of the site has been confirmed by this assessment in that it contained the Cumberland Plain Large Land Snail and supported potential habitat (such as tree hollows) for a number of other threatened species (such as microchiropteran bats). It is also in comparatively good condition with relatively few weeds in the understorey and none dominant.

...

The subject site has also experienced a great deal of disturbance with a long history of quarrying, deposition of spoil and overburden and other soil movements, seeding by introduced species, and significant hydrological changes to a small drainage channel. Water from the quarrying activities has been dammed and overflowed into this drainage channel, with an increased sediment load and changes in its chemical nature.

The ecological values of these disturbed areas are greatly diminished as a result, especially in the area associated with the riparian zone in the south of the site. Although this area supported two endangered ecological communities (Alluvial Woodland and Cumberland Plain Woodland), they are in a disturbed state and their condition is poor. The riparian zone in particular is dominated by weed species, many of which are declared noxious."

As indicated the proposed landfilling and waste management facility operations are not located in the vicinity of these area of ecological value and accordingly will have a negligible impact upon these areas.

#### **6.1.6 Acoustic Impacts**

It is proposed to use a variety of heavy machinery in the operation of the site. Adverse noise impacts are likely to be generated by trucks travelling to and from the site, crushing and grinding machines and compaction machines.

The nearest residential premises is located a considerable distance to the north of the site on the opposite side of the M4 Motorway.

An Acoustic Impact Statement was prepared by Renzo Tonin and Associates which assesses the level of acoustic impacts generated by the proposed development. The Statement concludes:

- “ Renzo Tonin & Associates have completed an assessment of environmental noise impact from the proposed Light Horse Business Centre and Rehabilitation of Pioneer Quarry to be located within Zone 1 of the Eastern Creek Industrial Precinct. Noise impact from the proposed development upon potentially affected residential receivers, has been quantified and compared to the noise guidelines set by Blacktown City Council's SEPP 59 and the NSW DEC for the operation of the site and road traffic noise.
- Operational noise from the site achieves the noise goals for Zone 1 of SEPP 59. Suitable noise management guidelines were recommended to aid in maintaining noise to compliant levels.”

#### **6.1.7 Heritage**

As indicated, the site is identified as containing areas of low, moderate and high level of sensitivity for the potential existence of aboriginal artefacts. The proposed engineered landfill and waste management facility will occur entirely over that part of the site which is identified as having a “low” sensitivity. Accordingly, there is unlikely to be any adverse impacts upon aboriginal cultural objects or places.

#### **6.1.8 Relationship to Neighbouring Properties**

The proposed works are located well away from any sensitive landuses, with the closest residential dwelling in the suburb of Minchinbury located a considerable distance to the north on the opposite side of the M4 Motorway. Therefore there is unlikely to be any nuisance in terms of noise, odour, fumes or visual impacts on any residential property.

### **6.2 Economic & Social Impacts**

The proposed development generally involves the reverse engineering of an existing quarry by taking excess virgin soil and engineered land fill from development sites across the Sydney Metropolitan area. The rehabilitation of the site through land filling will generate a significantly increased number of jobs to that currently existing on the site and will include employees with a similar set of skills, due to the operation of similar forms of machines. Accordingly, the level of employment generated by the development will significantly increase.

Upon completion of the filling of land with engineered landfill, the site will be immediately available for the redevelopment for employment generating activities as envisaged by SEPP No. 59. This ensures that the site is available within a quicker timeframe in comparison to if the quarry were to be filled with other forms of waste materials. For example, if the site were to be filled with alternative forms of waste such as putrescible waste, a number of additional years would be required to enable the land to “settle” prior to commencing any development works.

The subject site enjoys excellent connectivity to heavy vehicular access routes including the M4 and M7 Motorways providing arterial linkages to the north, south, east and west of Sydney.

Undertaking the proposed works will have medium term positive economic impacts through employment retention and generation, both direct employment and multiplier effects. Furthermore, at the completion of the rehabilitation of the site, the site will then be able to be development for employment generating activities as envisaged by SEPP No. 59.

### **6.3 The Suitability of the Site**

#### **6.3.1 Access to Services**

The site is located in close proximity to the intersection of the M4 and M7 Motorways providing high levels of regional accessibility. These already carry significant levels of heavy vehicular traffic associated with industrial uses in the Eastern Creek Precinct. As the site is within an area of industrial development, water, sewer, electricity, telephone, and gas services are provided to the site and will in the near future be expanded and upgraded (subject to separate development applications) to facilitate future employment development.

#### **6.3.2 Traffic Generation & Parking**

A Traffic Report has been prepared by Masson Wilson Twiney providing an assessment of the traffic impacts of the proposal. The report concludes as follows:

“ This report has been prepared to investigate the traffic effects of the rehabilitation of the Pioneer hard rock quarry at Eastern Creek.

The report is summarised as follows:

- The Eastern Creek Precinct provides an area of approximately 600ha and is zoned for employment uses.
- The precinct is to be developed in three stages. Blacktown City Council as the consent authority have produced a development framework for development of land designated for stage 3.
- The Pioneer quarry comprises Lot 2 DP 262213, Lot 1 DP 400697, Lot W DP 419612, Lot 10 DP 241859, Lot 11 DP 558723 of the Precinct. It is a mix of open space, a quarry and asphalt production buildings.
- Blue metal rock has been quarried at the site since the 1930's. Hanson Pty Ltd have a lease to November 2006 to conduct blue metal rock quarrying extraction and processing activities. However, quarrying activity is to be phased out over the period January 2006 to June 2006 due to quarrying reaching an untenable depth and providing a reduced quality of extracted material.
- Planning consent is sought to rehabilitate Pioneer quarry to its former state.
- An Extraction and Rehabilitation Plan has been produced which identifies the manner of quarry rehabilitation. It is intended to fill the void with suitable materials in a controlled manner, compact to level and allow groundwater levels to return to natural levels.

- The existing quarry on the site at full operation previously produced on average about 800 two way vehicle movements per day of which over 500 were trucks.
- The rehabilitation filling of the site is forecast to generate around 400 two way truck movements per day.
- Thus the rehabilitation is forecast to generate less truck movements than the current extraction operation.
- Four different scenarios for access to the quarry site have been investigated as follows:
  - Scenario 1 – Quarry vehicles use the existing right of carriageway and connect to the external road network via Old Wallgrove Road (this is the situation that currently occurs);
  - Scenario 2 – Quarry vehicles use the existing right of carriageway and connect to the external road network via Old Wallgrove Road and any connections to the M7 motorway which are provided as part of the overall Precinct plan;
  - Scenario 3 – Quarry vehicles use the existing right of carriageway or internal road network from Wallgrove Road and Great Western Highway or the industrial Estate roads which connect to Archbold Road to the north of the M4 bridge.; and,
  - Scenario 4 – Quarry vehicles use M4 ramp connections or Wallgrove Road.
- These access scenarios were all found to be satisfactory and provide the basis for staged changes to quarry access as the precinct develops.

The conclusions of the investigation are that:

- The traffic generation of the rehabilitation of the quarry will be less than the traffic levels associated with extraction, and
- Access to the quarry would be possible via any of the possible access scenarios and that routes used for quarry access should change over time in response to the gradual development of the Precincts road system."

### **6.3.3 Hazards**

The site is not in an area recognised by Council as being subject to flooding. The proposed development is not likely to increase the likelihood of such hazards occurring and is considered appropriate in this instance.

#### **Bushfire**

Whilst the subject site is not identified as being bushfire prone on Council's Bushfire Hazard maps, a Bushfire Hazard Assessment Report has been prepared by Holmes Fire and Safety. The report, which does not specifically relate to the proposed development, but rather its future redevelopment, provides a number of recommendations to prevent the spread of bushfire over the site. These recommendations have been considered in the preparation of the proposed development.

#### **Contamination**

A Phase 1 Environmental Site Assessment prepared for Lot 2 in DP262213 by CH2M HILL Australia Pty Ltd in October 2004 concluded that the site poses a low potential for residual soil contamination to be present.

The proposed development merely facilitates future use of the site generally for employment generating industrial purposes, which are less sensitive to impacts from any previous contamination. Accordingly, any required additional



investigations or required remediation can be undertaken as part of the landfill operations and quarry rehabilitation and therefore may be dealt with by appropriate conditions of consent.

### **Landslip**

A geotechnical report was prepared by Jeffery & Katauskas Pty Ltd. The report concluded, that in terms of geological constraints:

" The major geotechnical constraints to development identified are associated with the quarry stockpiles and quarry excavation. However the geotechnical constraints to development over the remainder of the site may generally be regarded as typical for this area of Sydney. In simple terms, development of the site area outside the quarry stockpiles and quarry excavation i.e. to the west of Archbold Road and south of the private road may be regarded as 'routine'.

In the quarry area, more specific geotechnical constraints affect any proposed development and significant geotechnical input will be required. Further, the remediation of many of these potential constraints would be achieved by the proposed future backfilling of the quarry in a controlled manner as described above."

Accordingly, landslip is not considered to be a significant risk providing appropriate engineering practice is followed in the engineered landfill operations and the recommendations of the geotechnical report are implemented.

## **7 CONCLUSION**

The proposed works will involve the filling of an existing quarry with engineered landfill to reinstate a suitable landform to enable the site to be redeveloped in the future in accordance with the provisions of SEPP 59 for employment generating development. It is anticipated that it will take approximately 30 years to completely fill the existing quarry, which will enable the eventual redevelopment of the last stage of the Eastern Creek Precinct.

The proposal is permissible with consent in the Employment Zone pursuant to SEPP No.59 and achieves the objectives for the zones. The proposal is also considered to generally comply with the relevant requirements under the *Eastern Creek Precinct Plan – Stage 3*.

The proposed works are considered to appropriately respond to the site constraints. The proposed development will have no significant impact on the micro-climate, air or water quality of the locality. Similarly, given the nature of existing and future surrounding development, and the proposed operations of the site being similar to that undertaken for the quarrying of the site, the proposal is unlikely to result in any adverse amenity impacts on neighbouring properties.

Furthermore, the likely traffic generation of the proposal is considered to be minimal and acceptable within the locality. It will not result in any significant impacts on the existing levels of service of the surrounding road network.

The proposed development is compatible with Council and State Government Planning objectives for the site and the locality. The site is suitable for the development proposed which will generally have acceptable environmental impacts and no significant adverse impacts on the amenity of the locality.