



**MODIFICATION REQUEST:
Enfield Intermodal Logistics Centre -
Modification 5
Cosgrove Road, Strathfield South
(MP 05_0147 MOD 5)**

Onsite relocation and reuse of excavated material deemed unsuitable for engineering fill at the Intermodal Logistics Centre operational areas to the southern part of the site.

Director-General's
Environmental Assessment Report
Section 75W of the
Environmental Planning and Assessment Act 1979

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EXECUTIVE SUMMARY

Sydney Ports Corporation received project approval for the development of an Intermodal Logistics Centre (ILC) at Enfield on 5 September 2007.

The concept design for the project estimated that approximately 37,000 m³ of material unsuitable for engineering fill would be removed from the site and disposed off site to a landfill facility.

Further investigation undertaken as part of the design development phase of the project indicates that up to 60,000 m³ of unsuitable material at the site is required to be disposed of. Sydney Ports Corporation has therefore applied for a modification to the project approval. The proposal is to place all the unsuitable fill on and around an existing stockpile located to the south of the site and known as Mt Enfield.

Mt Enfield would be expanded and raised by approximately 6.7m at its highest point, flattened at the top and landscaped. The proposed disposal of excess spoil to Mt Enfield is considered to provide a number of benefits including avoiding approximately 8,000 truck movements on public roads, not using 60,000 m³ of landfill space, containing the works within the site, and improving the structure and appearance of Mt Enfield.

The Department received seven submissions during the exhibition of the proposal, which raised the following key issues:

- stabilisation of the slope of the reshaped Mt Enfield;
- hydrological impacts including water quality and flow velocity;
- potential impacts to the Green and Golden Bell Frog, a listed threatened species;
- visual amenity; and
- impacts associated with construction including noise, dust, traffic and contamination.

The Department has considered the information provided in relation to the potential impacts of the proposal, and considers that design and construction issues associated with the proposed onsite management of unsuitable engineering fill would be adequately addressed and managed to acceptable levels. The Department therefore recommends that the modification be approved, subject to the existing requirements of the project approval being applied to these works, the submission to the Department of updated management plans, and additional recommended conditions of approval applicable to the works.

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1. BACKGROUND

Sydney Ports Corporation (SPC) has approval to construct and operate the Enfield Intermodal Logistics Centre (ILC), located within the Strathfield local government area, as shown in Figure 1. The Enfield ILC has approval to accept a maximum throughput of 300,000 TEU (one TEU is equivalent to one twenty foot container) per annum of containerised cargo by rail, including from Port Botany, for redistribution by road to markets in central western Sydney. The Project includes:

- demolition, relocation and removal of former railway buildings and structures;
- earthworks and drainage, including the levelling of the site, formation of landscape mounds and detention basins and removal of unsuitable materials;
- construction and operation of:
 - an intermodal terminal for the loading and unloading of containers;
 - rail sidings, railway lines and associated works to connect to the existing freight line;
 - warehousing for the packing and unpacking of containers and the short-term storage of cargo;
 - storage facilities for empty containers to be later packed or transferred back to the port or regionally by rail;
 - light industrial/commercial area fronting Cosgrove Road;
 - access works including the construction of a road bridge over the new marshalling yards for access to Wentworth Street and an upgrade of the entrance to the site from Cosgrove Road; and
 - internal roads, administration buildings, diesel and LPG storage and fuelling facilities, container washdown area, vehicle maintenance shed, and installation of site services (all utilities, stormwater and sewerage).

On 5 September 2007, the then Minister for Planning approved the project under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The following modifications to the approval have subsequently been submitted to the Department under Section 75W of the EP&A Act:

Modification 1: On 7 October 2008, the Executive Director, Major Project Assessments, as delegate for the Minister for Planning, approved a modification amending condition 3.2 regarding construction dust monitoring, including the technology to be used and the duration of monitoring.

Modification 2: On 30 March 2009, the Director-General, as delegate for the Minister for Planning, approved a modification amending condition 2.43 in relation to the requirements for a Section A Site Audit Statement and its timing. This modification also included the addition of condition 1.3A which allowed for the staging of the project.

Modification 3: Modification 3 is a pending application that has not been progressed by the Proponent.

Figure 1: Project Location



Modification 4: On 27 May 2010, the Director, Infrastructure Projects, as delegate for the Minister for Planning, approved a modification in relation to noise mitigation measures, the internal road layout, stormwater detention and treatment, warehousing and distribution components, and the wording of a number of construction related conditions.

Modification 5: Is the subject of this Environmental Assessment Report.

2. PROPOSED MODIFICATION

2.1 Modification Description

On 19 May 2011, SPC submitted a modification request (attached in Appendix A), applying for the onsite relocation and reuse of excavated material deemed unsuitable for engineering fill at the ILC operational areas to the southern part of the site. Unsuitable engineering fill is anticipated to be composed of grubbed vegetation (soil mixed with vegetation material), wet and unsuitable gravels/clay, and boulders and sleepers, and therefore unsuitable for re-use on the site.

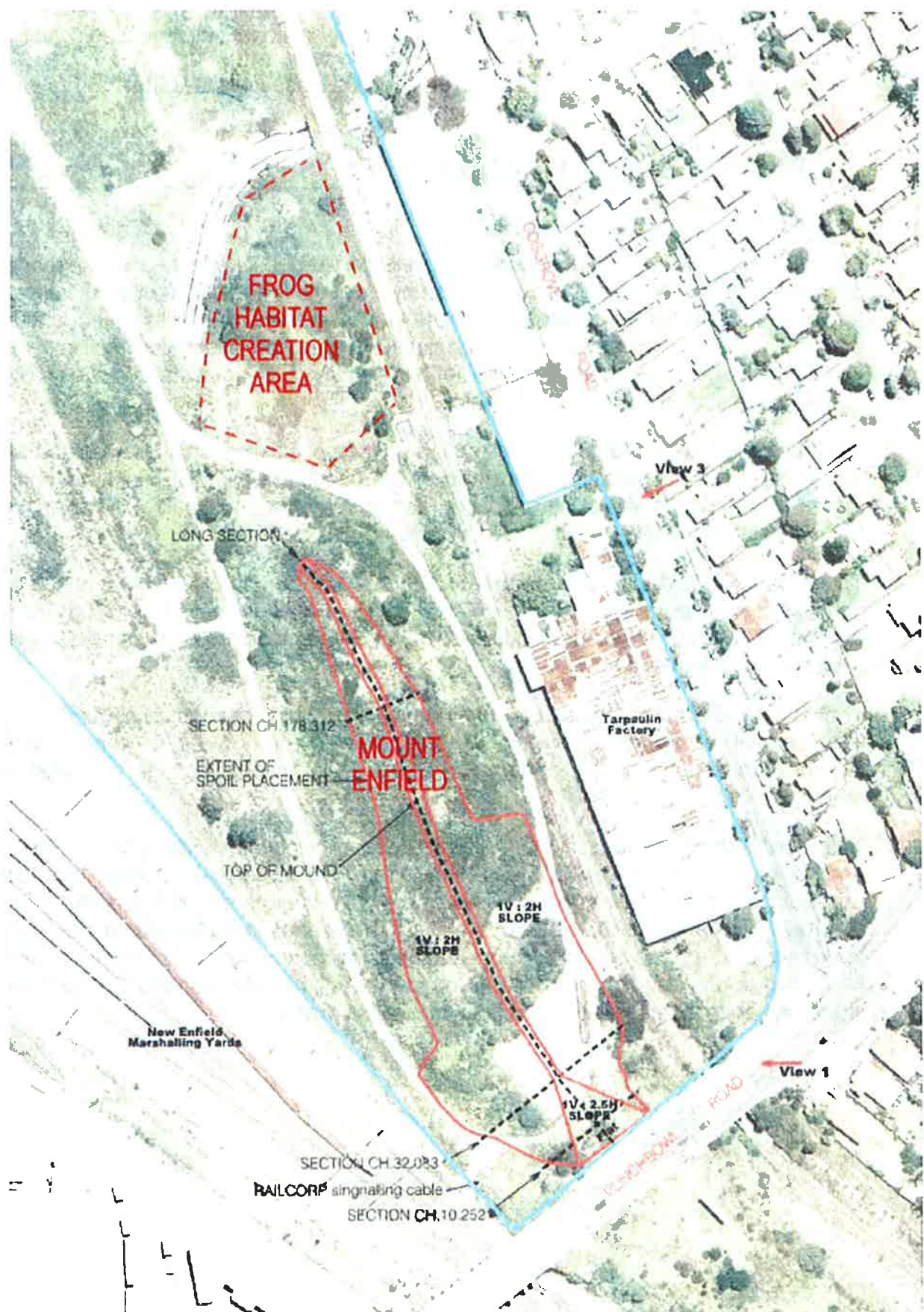
SPC proposes to place the fill on and around the existing stockpile located at the southern part of the site and referred to in this document as 'Mt Enfield', as shown in Figure 2. Mt Enfield would be expanded and raised by approximately 6.7 metres at its highest point, flattened at the top and landscaped.

The initial estimated 37,000 m³ of excess spoil, as identified in the EA, was based on the concept design for the project. The detailed design and additional site investigations now estimate 60,000 m³ of material for disposal at Mt Enfield, which is an upper limit based on available site information.

The placing of the fill material at Mt Enfield would result in environmental benefit through the removal of approximately 8,000 truck movements on public roads, and the revegetation and enhanced landscaping of Mt Enfield would provide improved visual amenity.

The reconfigured and landscaped Mt Enfield, the Ecological Heritage Community Area and adjoining Green and Golden Bell Frog Habitat Creation Area will remain undeveloped, and act as a buffer between the operational areas to the north of the site and residential areas to the south of the site. This area is to be fenced, landscaped and have restricted access and is to comprise of approximately 6.25 ha including at least two ha of frog ponds and foraging area. Community access opportunities will be available, including controlled escorted public access in these areas.

Figure 2: Proposed Modified Layout



The key aspects of the proposed modification are listed in Table 1.

Table 1: Key Proposed Modifications

Aspect	Description
<i>Construction</i>	The proposed relocation of material would be undertaken progressively during the main construction phase of the project, which would be expected to last approximately 18 months. The nature and quantity of unsuitable material to be relocated is anticipated to be composed of: - grubbed vegetation (soil mixed with vegetation material) - approx 10,000m³; - wet and unsuitable gravels/clay fill – approx 20,000m³; and - boulders, unsuitable materials and sleepers – approx 30,000m³. Earthworks and excavation activities at the main Enfield ILC site would remain as described and assessed in the EA.
<i>Post-Construction</i>	The highest point of Mt Enfield would be raised from 29.3m AHD to approximately 36.0m AHD. The northern, eastern and western sides of Mt Enfield would have a slope of 1V:2H. The southern slope is to be 1V:2.5H. Controlled and restricted public access to a lookout at the top of Mt Enfield would be provided.

3. STATUTORY CONTEXT

3.1 Modification of the Minister's Approval

The approved project by virtue of schedule 6A of the EP&A Act is a *transitional Part 3A project* and therefore Part 3A of the EP&A Act continues to apply in respect of this project. Section 75W of the EP&A Act provides that a Proponent can request the Minister to modify the approval of a project. The Minister's approval is not required if the project, as modified, will be consistent with the original approval. The subject modification is not consistent with the approval, but would not result in a radical transformation and therefore an assessment in accordance with Section 75W of the EP&A Act is considered appropriate.

4. CONSULTATION AND SUBMISSIONS

4.1 Exhibition

Under Section 75X (2) (f) of the EP&A Act, the Director-General is required to make the modification request publicly available. The Department:

- publicly exhibited the modification from 28 June 2011 until 14 July 2011:
 - on the Department's website;
 - at the Department of Planning and Infrastructure;
 - at the Nature Conservation Council; and
 - at Strathfield City Council.

- advertised the public exhibition in the Canterbury-Bankstown Express and Inner West Courier on 28 June 2011 and 30 June 2011 respectively; and
- notified relevant State and local government authorities in writing.

The Department received seven submissions during the exhibition of the modification request – four submissions from public authorities, one industry submission, and two submissions from special interest groups. A summary of the issues raised in submissions is provided below.

4.2 Public Authority Submissions

Office of Environment and Heritage – Conservation Team: considers that the proposed modification is unlikely to have any adverse impacts on the existing heritage items located at the site.

Office of Environment and Heritage – Environment Protection and Regulation Team: raised concern with the gradient of the proposed slope of the filling area, and considered it to be in excess of the recommended slope for stockpiling as detailed in *Soils and Construction: Managing Urban Stormwater* (Landcom 2004). OEH recommended a management plan to manage the steep batters during construction and until stabilised, and provided commentary and recommendations in relation to covering soil, water and dust issues.

Bankstown City Council: considered that a number of issues should be addressed prior to determining the proposal.

Council considered there was not adequate justification for the variation of spoil volume, initially 37,000 m³ to be removed from the site, to a new estimate of up to 60,000 m³. Council recommended that the Department seek further clarification on the variation to the estimate of the excess spoil prior to determining the proposal.

Council raised concern regarding the visual impact of the project and the future landscape of the locality. The reshaped Mt Enfield would be visible from a number of residential areas around the locality with most impacts to those on the southern part of Mt Enfield, along Punchbowl Road. Council requested that it and the community be consulted during the preparation of Landscape Plans.

Council considered that neither the project's original EA or the Preferred Project Report satisfactorily resolved Council's previous concerns relating to traffic, noise, air quality and hazard assessment of the project, and notes that the cumulative noise and dust emissions from both the approved activities and the additional filling activities would have an adverse environmental impact. Council requested it be notified and consulted with during the preparation of construction and operational environmental management plans, including the construction traffic management plan, environmental noise management plan, and dust management plan.

Strathfield Municipal Council: Council stated it was unable to support the proposed modification request until a number of issues were further addressed.

Council identified that there was a need to ensure sufficient measures are implemented to protect the existing Green and Golden Bell Frog (GGBF) habitat and movement of frogs, which are located in close proximity to the proposed works. This included sediment and erosion controls and fencing.

Council requested that a further ecological assessment and species impact statement be undertaken to ensure that the impacts of the proposal on frog populations are fully considered, including potential for revegetation of Mt Enfield to attract species which are potential predators for the GGBF. The ecological assessment should also consider the importation of soil, compost and other landscaping materials for the implementation of the revegetation of Mt Enfield, as these materials may contain spores of *Batrachochytrium* which is potentially fatal to the GGBF.

Additionally, Council raised concern in relation to the potential loss of existing habitat that the vegetation on the mound currently provides, including for small birds, reptiles and amphibian species. Consideration of where such fauna could move to during the proposed construction period should be included in the modification report.

Council noted that the stockpile would be visible from a number of residential areas, which has the potential to negatively impact views from adjoining residential areas, or to provide a positive outcome by screening less attractive views of the existing Enfield Intermodal Logistics Centre. Council requested further consultation be undertaken with local residents, and that shadow diagrams be provided to further inform the impact of the proposed stockpile.

Council considered that the proposed mound with its steep slopes should not be permitted, due to high risk of scouring and sediment loss particularly in rainfall events, as the slopes are too steep to accommodate suitable grading for planting. Council also noted that the modification request did not clearly demonstrate where the runoff from the proposed mound would be directed to, and that ponding and flow paths for runoff should be provided to demonstrate that additional runoff volume and velocity had been investigated and allowed for. Council noted that drainage from the site needed to be controlled so that there would be no additional stormwater leaving the site at each point of discharge than occurred prior to the proposed development.

Council considered there was a need to ensure that the mitigation measures outlined in the modification report are adhered to, including the need for regular and ongoing consultation with the community. The Construction Environmental Management Plan (CEMP) should be updated to include the recent modification and a copy provided to Council. In particular, the CEMP should provide for more intensive mitigation measures to ensure impacts of dust are minimised.

Council also raised concerns for the future use of the Community and Ecological Area that was committed for community and ecological purposes as part of the original approval.

Council was further consulted on the draft recommended conditions of approval. Council considered that whilst the draft conditions were a positive step towards addressing some of the issues raised by Council, there were still a number of matters which remained outstanding, including visual impacts, ecological assessment and future use of the Community and Ecological Area.

4.3 Public Submissions

Three submissions were received from the other stakeholders, comprising of the following:

- No Port Enfield Community Group;
- South West Enviro Centre Inc; and
- Qenos Pty Ltd.

The key issues raised in public submissions are summarised in Table 2.

Table 2: Key Issues Raised

Issue	Description
<i>Green and Golden Bell Frog (GGBF)</i>	The recent discovery of a colony of GGBF to the east of the site makes the site's functionality as GGBF habitat and movement corridor critical in maintaining the local population of this threatened species. It is critical that an east west movement corridor is maintained at all times for potential frog movements between the eastern population and the population west of the Enfield ILC site in the former Greenacre Brickpit and Cox's Creek Reserve. Modification 5 would substantially alter the initial Enfield ILC proposal, in particular significantly alter the southern area of the site with negative impacts on foraging and sheltering habitat, presently found on Mt Enfield and the surrounding area. The modification proposes an 18 month construction period. As the frog habitat north of Mt Enfield and south of Cox's Creek is presently under construction, this would effectively leave little or no vegetative frog habitat in most of the southern area for some period of time.
<i>Contamination</i>	Concern was raised that previous soil contamination tests conducted showed levels that fell close to, or over acceptable levels of contaminants, and that once contaminated soil is disturbed and particulates become airborne, the levels of contaminants become a human health issue, and that the rate of dust deposition is above average in this area. The Proponent should demonstrate that the existing contaminated stock pile has been regularly tested for leaching into the Cooks River. The Proponent should also demonstrate that nothing from the site would be able to cross the boundary during or after modification.
<i>Community and Ecological Area</i>	The modification request is a significant alteration to the original proposal in relation to the Community and Ecological area at the southern end of the site, and should be subject to a new and separate development application. The size of the area has been continually downsized and it remains unclear what use the community will have of the area.
<i>Ethylene pipeline</i>	Qenos requested that the protocols that are in place between SPC, Qenos and their contractors be retained and that truck crossing points of the Ethylene pipeline be defined if and when they are required.

The Department has considered the issues raised in submissions in its assessment of the proposed modification.

5. ASSESSMENT

5.1 Slope Stability

The augmentation of the existing Mt Enfield stockpile with increased fill would increase the length and height of the mound and gradient of its batters. The area within the Enfield ILC site immediately north of Punchbowl Road would be filled to the same 26 metres AHD level as the existing footpath on the Punchbowl Road vehicular bridge adjacent to the site, for a distance of approximately 10 – 12 metres. The infill area would then rise at

a slope of 1V:2.5H (vertical:horizontal) steepness to 35.25 metres AHD before flattening out to the highest point of 36 metres AHD. The northern, eastern and western sides of Mt Enfield are proposed to have a slope of 1V:2H steepness. Location of the Mt Enfield stockpile site, including the extent of the spoil placement and slope batters, is shown in Figure 2.

The proposed relocation of material would be undertaken progressively during the main construction phase of the project, expected to last approximately 18 months. Approximately 80% of the material would be relocated to Mt Enfield in the first six months, with the remainder occurring progressively over the following 12 months. The material would be deposited in designated prepared areas on and around Mt Enfield. The slopes of Mt Enfield are currently vegetated and this would be retained where feasible.

An excavator or bulldozer would spread, level and track roll to nominally compact the material, after which time landscaping works would be carried out. The proposed design includes vegetation suitable for the slope, and the use of hydro-mulching and hydro-seeding may also be adopted for initial stabilisation.

The Department notes concern raised by OEH and Strathfield Council regarding the steepness of the slope and the subsequent stabilisation issues including that it may be too steep for planting and pose scouring and sediment loss impacts during rainfall events.

The Proponent indicated that soil erosion and sedimentation control during construction would be managed through the Construction Environmental Management Plan (CEMP) required under condition 6.2, which includes a Soil and Water Management Plan. Further site specific sediment and erosion control measures would be implemented through Erosion and Sediment Control Plan/s developed for the fill area. This would include measures to ensure that fill material is retained and batters progressively stabilised. Measures such as those recommended in *Soils and Construction: Managing Urban Stormwater* (Landcom, 2004) and other appropriate guidelines would be considered for the final design of the landform.

The Department notes that *Soils and Construction: Managing Urban Stormwater* recommends a maximum of 1V:2H slopes for stockpiles, and notes that rehabilitating steeper slopes of >1V:2.5H by vegetative means can be difficult, but provides guidelines for additional methods to allow for the effective stabilisation of steeper slopes.

Accordingly, the Department acknowledges that management of steep slopes during the 18 month construction period for the reshaped Mt Enfield will require specific mitigation measures in response to the potential for erosion and dust impacts. The Department considers that whilst the CEMP and Soil and Water Management Plan would contribute to managing erosion and sedimentation issues associated with construction of the earth mound, additional specific management measures are required to ensure that potential impacts that could occur as a result of the exposed steep slopes during construction are managed.

Measures to prevent soil erosion, dust and the discharge of sedimentation would include:

- minimising exposed working areas;
- progressive rehabilitation of completed areas;
- sedimentation control devices including sediment fences downstream of the active fill emplacement working area; and
- sediment fencing surrounding the frog ponds.

The Department therefore recommends a condition of approval requiring preparation of a Mt Enfield Stabilisation Management Plan to specifically address management of the steep batters of Mt Enfield during construction and until such time as it is stabilised with vegetation. The stabilisation plan is also required to include consideration of soil, water and dust issues.

5.2 Hydrology

The Enfield ILC site is located within the Upper Cooks River Catchment. Four drainage lines flow beneath the site, including Cox's Creek in the vicinity of Mt Enfield. Cox's Creek crosses the Enfield ILC site as an underground reinforced concrete culvert that discharges into an open concrete lined canal within the site near Cosgrove Road.

The main water quality impacts which could potentially occur during the filling in and around Mt Enfield would be the export of sediments and other pollutants, such as nutrients, to Cox's Creek and the Frog Habitat Creation Area, (discussed further in Section 5.3) due to the exposure of soils to erosion. Mitigation measures would be implemented to minimise impacts on the water quality of Cox's Creek, and to avoid water quality impacts on the constructed frog ponds. Drainage measures to be implemented during construction would be managed through the CEMP including a Soil and Water Management Plan, as required by the existing condition of approval 6.2.

The local catchment boundaries would not change as a result of the reshaped Mt Enfield, with the volume of water falling in the catchment remaining unchanged. Further, no flood impacts for floods up to the 100 year ARI are anticipated as the proposed stockpile would be above this flood level.

The Department notes that Strathfield Council raised concern regarding the detail of drainage of the site, including that ponding and flow path areas for runoff should be provided to demonstrate that the additional runoff volume and velocity has been investigated and allowed for. Council considers drainage from the site needs to be controlled so no additional stormwater leaves the site at each point of discharge than occurred prior to the proposed development.

Whilst the Proponent identified that reshaping of the mound would not significantly increase the volume of runoff to downstream receiving waters, the increased length and steepness of batters in some areas of Mt Enfield could result in increased velocities, which could create ongoing erosion and sedimentation issues. Erosion and sedimentation issues are intended to be mitigated by designing, constructing and maintaining appropriate drainage measures including sediment fences, sandbags, check banks and speed humps, as well as the provision of laterally drained benching and berms and the use of diversion drains.

Ongoing management of potential hydrological impacts would be through appropriate design and maintenance of the final landform, including appropriate vegetation on slopes and use of hydro-mulching and hydro-seeding during the vegetation process to retard flow velocity and minimise erosion.

The Department considers that the existing requirements including the preparation of a CEMP, updated to include erosion and sedimentation control management measures for the Mt Enfield stockpile site works, are adequate to manage the potential construction impacts on hydrology. Additionally, as part of slope stabilisation, the Department has

recommended a specific condition of approval for the preparation of a Mt Enfield Stabilisation Management Plan. This Plan outlines requirements for specific performance criteria, including that any associated increase in flow velocity is provided for so that it does not exceed current rates, and that ongoing management of drainage structures and landscaping are considered in the project's Operation Environmental Management Plan.

5.3 Flora and Fauna

A Flora and Fauna study undertaken for Mt Enfield concluded that the area has become overgrown and colonised by vigorous weedy shrubs, vines and herbs. Wattles have become established around the lower parts of Mt Enfield but these compete with invasive vines and tall weeds that threaten to overgrow them. There are no significant plant species in this area.

A potential GGBF habitat area is located approximately 100 metres to the north of Mt Enfield, (as shown in Figure 2). In accordance with condition 2.48, SPC has constructed a Frog Habitat Creation Area, including frog ponds within the potential GGBF habitat, which has been provided with frog protection fencing.

This area would not be affected by the proposed filling works at Mt Enfield. The frog ponds and potential habitat area are currently separated from the northern extent of Mt Enfield by a bitumen access road, two metre high chain fencing, as well as frog fencing around the Frog Habitat Creation Area. This arrangement would remain for the duration of the filling works. The Frog Protection Plan, which is part of the CEMP for the site, would continue to be implemented during the filling works.

Strathfield Council raised concerns regarding potential impacts on GGBF populations, and considered that a further ecological assessment should be undertaken. Key concerns included:

- measures to protect existing frog habitat and movement corridors;
- sediment controls and fencing;
- the importation of soil, compost and other landscaping material which may contain spores of *Batrachochytrium*;
- leachate and dust protection measures; and
- potential predators of GGBF.

Additionally, Strathfield Council raised concern in relation to the potential loss of existing habitat that the vegetation on Mt Enfield currently provides to small birds, reptiles and amphibian species, and where this fauna could move to during the proposed construction period.

The No Port Enfield community group suggested that the proposal should be a controlled action under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act). Given the functionality of the Enfield ILC site as a corridor between the recently discovered colony of GGBF located to the east of the site, and the population located to the west of the site, Sydney Port's current Frog Management Plan would require significant revision. South West Enviro Centre was concerned with the impact that contamination from the proposal would have on the GGBF population on the Enfield ILC site and in the surrounding area.

In response to the concerns raised during the exhibition period the Proponent prepared an Ecological Impact Assessment. This Assessment concluded that Mt Enfield is not a potential frog habitat and the proposed works would not have a significant impact on any GGBF on the site or in the surrounding area provided appropriate mitigation measures were in place, including:

- frog fencing around the GGBF Habitat Creation Area;
- truck movements are not to occur outside of daylight hours when GGBF are active;
- checking of the haul road after rainfall events for GGBF;
- dust suppression measures;
- sedimentation and erosion control measures;
- no exclusion fences are to be placed around the haul road to allow east – west frog movement across the site; and
- GGBF predator species control if required.

The Department considers that the Ecological Impact Assessment has adequately demonstrated that construction of the modified Mt Enfield would not adversely impact the Frog Habitat Creation Area north of Mt Enfield, subject to implementation of mitigation measures including slope stabilisation, dust, erosion and sedimentation control.

Additionally, whilst the Department notes that the proposed works would not prevent any potentially occurring GGBF from dispersing east-west across the Enfield ILC, any potential east-west movement corridor is currently intersected by the existing haul road. The Department considers that site preparation measures would ensure that risks to frogs crossing the site can be negated by ensuring that truck movements do not occur outside daylight hours when GGBF are active, and checking the haul road after rainfall events for GGBF.

Mt Enfield provides habitat for a number of other non threatened native species, including small birds and reptiles. These species could be impacted by the loss of vegetation to areas of Mt Enfield during stockpiling of fill material. However, the Department considers that the Ecological Impact Assessment has adequately demonstrated that while short term impacts are expected from the construction of the infill area and loss of vegetation, the proposal would not significantly impact on these fauna species.

The Department considers that the existing requirements of the project, including implementation of the Frog Protection Plan as part of the CEMP, updated to include consideration of the Mt Enfield stockpile site works, is adequate to manage potential impacts of construction on existing adjacent frog colonies and potential east-west frog movements.

Notwithstanding, the Department recognises that the proposed gradient to the batters of Mt Enfield and the slopes stabilisation, both during its construction and once filling has been concluded, and the consequent issues surrounding potential soil, water and dust impacts, could impact on Green and Golden Bell Frog populations if not appropriately managed. It is therefore recommended that these issues are addressed in the Mt Enfield Stabilisation Management Plan, as discussed in Section 5.1 of this report.

5.4 Visual Amenity

Currently, partial views of Mt Enfield can be obtained from a small number of residences fronting Cosgrove Road and Punchbowl Road, located adjacent to the fill emplacement area. Distant views of Mt Enfield (approximately 400 - 500 metres distance) can be obtained from some residences in Wentworth Street, located to the west of Mt Enfield. Mt Enfield is also visible to drivers using Punchbowl Road and to some extent Cosgrove Road. Currently, the top of Mt Enfield is approximately 10 -14 metres above the adjacent land or 29.4 metres AHD, and is overgrown with weeds and exotic plants.

The highest point of the modified and raised Mt Enfield would be 36.0 metres AHD, an additional 6.6 metres above the existing highest point. However, lower sections of the filled area could be raised by up to approximately 15.2 metres, particularly toward the southern end of the infill area.

The key viewing areas as a result of the reshaped and raised Mt Enfield would be:

- from Punchbowl Road, facing north-west - the proposed re-shaped Mt Enfield would be visually prominent;

Existing view from Punchbowl Road facing north-west



Simulated view from Punchbowl Road facing north-west



- from Cosgrove Road facing west - Mt Enfield would appear to be approximately three metres higher, but no closer than the existing stockpile; and

Existing view from Cosgrove Road facing west



Simulated view from Cosgrove Road facing west



- from Wentworth Street facing east - current views of the roof of the tarpaulin factory in the distance would be screened.

Existing view from Wentworth Street facing east



Simulated view from Wentworth Street facing east



No significant views from residential areas would be screened by the reshaped Mt Enfield, and in the long term the reshaped and landscaped Mt Enfield would provide an improved visual amenity for areas with views to the southern end of the ILC site, as a result of improved shape and landscaping.

The Department notes that both Bankstown and Strathfield councils indicated that the proposed infill area would be visible from a number of residential areas, with varying degrees of visual impact dependent on location and on success of the landscaping and revegetation program. Strathfield Council also raised concern regarding the proposed height of the mound, and requested shadow diagrams to illustrate potential impacts from the height of the mound.

Shadow diagrams were subsequently prepared and included in the Proponent's Response to Submissions report, which indicated that shadowing from the augmented mound would not impact on surrounding residential areas or industrial buildings.

The Enfield ILC Community Liaison Committee (CLC) was presented with the proposal by Sydney Ports on 4 May 2011. The CLC supported the proposal and considered that the changes would result in a substantial improvement in the visual quality of Mt Enfield and would be a benefit to the local community, provided dust impacts and traffic movement impacts to potential frog corridors were managed appropriately.

The Department acknowledges that the proposal would alter the visual amenity of some residences adjacent to the southern part of the ILC site, in particular residences fronting Punchbowl Road and Cosgrove Road. However, the Department considers that the visual modification on Punchbowl Road and Cosgrove Road would be moderated by the

overall improvement to the visual amenity provided by the reshaped and landscaped Mt Enfield, and therefore the proposal would not have significant impact on surrounding residential areas.

Landscaping will be undertaken in consultation with the community, and by a landscaping contractor whose role will include landscaping performance and maintenance requirements for a defects liability period of 52 weeks. SPC will subsequently include landscaping areas in their assets maintenance schedule.

The Department considers that whilst the existing requirement to prepare a Landscape and Ecological Area Management Plan is adequate for the management of the Enfield ILC site in general, specific consideration should be given to landscaping of Mt Enfield. It is therefore recommended that this issue is addressed in the Mt Enfield Stabilisation Management Plan, which would include measures for the enhancement, revegetation and ongoing landscape management of the Mt Enfield site, undertaken in consultation with Councils and the local community.

5.5 Construction Impacts

Noise

The location of the nearest sensitive receivers to the proposed works at Mt Enfield, and potential increase to noise levels, are provided in Table 3.

Table 3: Nearest noise sensitive receivers to proposed work at Mt Enfield

<i>Location</i>	<i>Receiver Type</i>	<i>Approximate distance from Mt Enfield</i>	<i>Increase to EA Noise Level</i>
Wentworth Street	Residential	330 m	0
Cosgrove Road	Residential	90 m	0
Punchbowl Road	Residential	60 m	<1

The results of the noise impact assessment for the modification are generally consistent with that of the EA, indicating the risk of an occasional exceedance of the project construction noise criteria at the nearest residences under worst case scenarios and assuming no noise controls are in place. The additional noise contribution from the proposed modification is negligible (0 or <1 dBA) at surrounding residences. Therefore, construction activities associated with the modification would not result in noticeable increases to construction noise levels predicted in the EA. Potential occasional exceedances would be managed through the implementation of mitigation measures.

The Department notes that Bankstown Council raised concerns regarding the cumulative impact of construction noise. The Department considers that based on the predicted negligible noise levels and the existing requirement to prepare a Construction Noise Management Plan for the works, updated to include consideration of the Mt Enfield stockpile site works, construction noise impacts can be adequately managed.

Dust

The proposed fill reuse activities are anticipated to occur during the construction cut and fill works. Dust deposition, annual average total suspended particles and annual average PM₁₀ concentrations have been predicted to be below the assessment criteria at all sensitive receptors. Additionally, there would only be a low risk of offsite impacts from

short term (24 hour average) PM₁₀ levels at surrounding receptors, if dust mitigation measures are implemented.

The NoPE community group and South West Enviro Centre Inc. were concerned that soil contamination tests showed high levels of contaminants, and that contaminated airborne particulates would pose a human health issue. NoPE also consider that dust deposition is above average in the local area.

On site air quality monitoring of PM₁₀ concentrations indicates that no exceedance of the 24 hour average PM₁₀ criteria due to current construction activities has occurred to date, indicating that management practices and mitigation measures are being effectively implemented.

The Department notes that both Bankstown and Strathfield councils raised concerns regarding the cumulative impact of construction dust emissions. The Department considers that the existing requirements, including undertaking meteorological and construction dust monitoring, and management of emissions in accordance with the Construction Dust Management Protocol are generally adequate to manage any potential dust generated by the additional construction activities. Notwithstanding, the Department has recommended a specific condition of approval for the preparation of a Mt Enfield Stabilisation Management Plan, which would ensure additional dust management measures are implemented.

Contamination

The Proponent has identified that contaminated material may be found during cut and fill activities, and that any proposals to contain or encapsulate contaminated material at Mt Enfield, would be undertaken in accordance with the Site Remedial Action Plan, the requirements of the Site Auditor, and the requirements of the Department's existing conditions of approval 2.42 and 2.43. The accredited Site Auditor concluded in Site Audit Statement GN 401 – 2A that *'the risk of migration of contaminants to groundwater has been fully assessed and no further on site groundwater management or remediation is required'*.

The South West Enviro Centre Inc. raised concern that previous soil contamination tests conducted showed levels that fell close to, or over acceptable levels of contaminants, which may become a human health issue, and may leech into the Cooks River.

Previous contamination assessments in 1996 and 1999 undertaken for the Enfield ILC site concluded that spoil within the five site stockpiles, including Mt Enfield, had contamination concentrations less than the adopted site criteria and there was no significant contamination in any of the five stockpiles on site. In particular, the contamination assessment undertaken in 1999 concluded that *'there was no contamination that poses a potential threat to the environment or human health under the proposed land use scenario ... the material could be retained on site or used for landscaping purposes or to further level/reclaim areas on the site'*.

No further concerns were raised by Office of Environment and Heritage regarding potential contamination management. The Department considers that the existing requirements to undertake remediation works in accordance with the requirements of the *Contaminated Land Management Act 1997* and *Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites* (EPA, 1997), are adequate to manage any disturbed contaminated areas of the site.

Traffic

The proposal is considered to have positive impacts on traffic as approximately 8,000 truck movements would be avoided on public roads. Instead, approximately 8,000 short truck movements (to and back) would be required to transport the material internally within the site. This is equivalent to an average of about 26 to 48 internal truck movements per standard working day.

An underground high pressure ethylene pipeline is located on the eastern side of Mt Enfield and the Enfield ILC site. Qenos, the pipeline operator, has provided a submission requesting that should trucks be required to cross the ethylene pipeline, defined crossing points should be determined.

The Department is satisfied that the modified works would not impact on the public road network, and considers that should the internal truck haulage routes be required to cross the ethylene pipeline, these crossing points should be clearly defined and agreed with Qenos and contractors. The Department has therefore recommended a condition of approval to this effect.

5.6 Community and Ecological Area

The southern portion of the Enfield ILC site, approximately 6.25 ha, including the GGBF Habitat Creation Area, Mt Enfield and the Heritage Precinct, was approved to provide limited community access opportunities, to facilitate GGBF habitat and breeding, and to provide a buffer between the site and adjoining residences. The reconfigured, landscaped and revegetated Mt Enfield would remain as an undeveloped area of the Enfield ILC site and have restricted and managed access to the general public. Visitors would be escorted to a lookout area at the top of Mt Enfield via a secure delineated pathway. Additionally, the Heritage Precinct would be used for display of the heritage listed Pillar Water Tank, along with heritage interpretation panels relating to the previous use of the site as a rail marshalling yard.

The No Port Enfield Community Group considers that the modification request is a significant alteration to the original proposal in relation to the Community and Ecological area, which has been downsized and modified through the project application, approval process and modification proposals, and that it remains unclear what use the community will have of the area. Strathfield Council also raised concerns regarding the future use of the Community and Ecological area.

The Department notes that subsequent modifications have not affected the Community and Ecological Area and that the GGBF Habitat Creation Area and Mt Enfield stockpile have been designed and constructed in accordance with the Project Approval. The modification request does not alter the size of the Community and Ecological area, or have a material affect on its purpose, which was always envisaged to have limited public access.

Accordingly, the Department considers that the Proponent has provided for appropriate community access to the Heritage Precinct and the lookout proposed at the top of Mt Enfield, consistent with the approved project.

6. CONCLUSION AND RECOMMENDATIONS

Sydney Ports Corporation has approval to construct and operate the Enfield Intermodal Logistics Centre (ILC). The Enfield ILC will provide for the transfer of containerised cargo accepted by rail for redistribution by road to markets in central western Sydney.

The proposed modification applies to the onsite relocation and reuse of excavated material deemed unsuitable for engineering fill at the Enfield ILC site. Further investigation undertaken as part of the design development phase of the project indicates that the volume of unsuitable material at the site that is required to be disposed of is up to 60,000 m³. The proposal is for this fill material to be placed on and around the existing stockpile located to the southern part of the Enfield ILC site.

The Department, in its assessment of the proposal, reviewed the Proponent's Modification request and the Response to Submissions report. Additionally, public submissions from the Office of Environment and Heritage, Strathfield Municipal Council, Bankstown City Council, Qenos, No Port Enfield Community Group, and South West Enviro Centre were considered.

The key environmental impacts, which are also reflected in the issues raised in public submissions, focused on:

- stabilisation of the slope to the proposed infill area;
- hydrological impacts including water quality and flow velocity;
- potential impacts to Green and Golden Bell Frog, a listed threatened species;
- visual amenity; and
- impacts associated with construction, including noise, dust, traffic and contamination.

The Department's assessment found that the Modification would provide environmental benefit, through the removal of a significant number of trucks from public roads and revegetation of the site with native flora. The proposal also presents some potential but manageable residual environmental impacts, particularly in relation to slope stabilisation and hydrology. Accordingly, with the Proponent's environmental commitments and the existing and recommended conditions, the Department considers that the proposal can proceed in a manner that meets acceptable environmental and amenity criteria.

Consequently, the Department considers that the modification is in the public interest, and recommends that the Minister approve the Modification request, subject to the recommended conditions of approval.


21.10.11
A/ Deputy Director-General
Development Assessment and Systems Performance


4/11/2011
Director-General

APPENDIX A MODIFICATION REQUEST

See the Department's website at <http://majorprojects.planning.nsw.gov.au>.

APPENDIX B SUBMISSIONS

See the Department's website at <http://majorprojects.planning.nsw.gov.au>.

APPENDIX C RECOMMENDED MODIFYING INSTRUMENT
