REPORT TO ACCOMPANY A SECTION 75W APPLICATION
Proposed Modifications to Illawarra International Health Precinct (MP 08_0156)
at
22 Avondale Road,
Penrose

Prepared for
La Vie Developments Pty Ltd

By
BBC Consulting Planners

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1. INTRODUCTION

This report has been prepared on behalf of the proponent, La Vie Developments Pty Ltd in relation to the application made 22 September 2011 under S75W of the *Environmental Planning and Assessment Act, 1979* (the Act) to modify the approval to project application No 08_0156 determined by the Minister on 31 January 2010 ("project approval"). This is referred to as the "S75W application".

The project approval is for subdivision of the site and development of Stage 1 of the Illawarra Health Precinct, a SurgiCentre with 2 storeys of basement parking and associated infrastructure.

The site to which the approval relates is Lot 200 in DP6077550 located at Avondale Road, Penrose.

Work has commenced under this project approval being bulk earthworks. Works undertaken include:

- Site establishment works including a fenced off work zone, site offices, access and construction traffic management facilities.
- Bulk earthworks excavation to suite the set out of the stage 1, including liquid nitrogen storage area and to provide suitable levelled areas for working space for plant, material, equipment site offices and associated parking. The excavated platforms are also intended to be of advantage to future stages providing efficiencies in the construction of stage 1 and future stages.
- The construction of an acoustic mound adjacent to Goolagong Street comprising top soil to be reused on the site.
- The placement of fill in the south eastern part of the site. This fill is contained behind a retaining wall constructed adjacent to Goolagong Street and then returning south parallel to the common boundary with residential properties between Goolagong Street and Huntley Road.
- The stockpiling of excavated material within a stockpile area located on the south eastern part of the site. This stockpile has been stabilised and grass seeded.
- Approximately 8,800 cubic metres of excavated material in the Stage 1 excavated building platforms forming part of the Stage 1 construction works.

These works are shown on the Drawing contained in Appendix 1.

The work schedule approved as part of the construction documentation for the project envisaged the progressive disposal of excavation of material off site with selected material stockpiled for future deployment.

Rather than transport material off site, material has been retained on site for future use as it was determined to be a valuable resource for slab and road base and other construction uses. The overarching objective of the proponent in relation to the management of excavated material and its storage on site is to achieve a balance of cut and fill over the site over the life of the project. This is considered a desirable objective for the development and one that is totally consistent with objects of the Act. It prevents off site transport of excavated material (to and from the site) and the additional impacts and emissions

associated with such transport. In this regard it is noted that the reason for the conditions imposed on the project approval included the encouragement of ecologically sustainable development, protecting the amenity of the local area and adequately mitigating environmental impacts of the proposal. A balance of cut and fill over the site achieves these outcomes.

The rock retaining wall and the stockpile have been inspected and have found to be stable and with stormwater management measures in place.

Hydromulching has resulted in an effective cover that has now reached a height in excess of 600mm. The grass seeding has been effective in greening the site and preventing erosion and sedimentation such that after recent rain, no sediment runoff was observed in the stormwater leaving the site. The grass also prevents dust moving off the site and established a ground cover similar to pre-development conditions. The site in its present condition can be seen in the series of photos contained in Appendix 2. These shown the established grass on the previously disturbed areas.

The visual appearance of the mounds is similar to the previous hill on the site being a grassed rural landscape.

2. THE PROPOSED MODIFICATION

The modification to the project approval seeks to include additional conditions to the project approval to bring clarity to the proposed method of managing excavated material and to resolve on-going issues with the project with elements of the local community.

The application seeks additional conditions to be incorporated as part of the approval to give effect to the following works:

2.1 Proposed Works

The works proposed to be undertaken by the proponent are shown on the Drawing contained in Appendix 3 prepared by Craven Ellison & Hayes (Dapto) Pty Ltd, Surveyors and are as follows:

1. Dry Rock Retaining Wall – The dry rock retaining wall and the fill material behind the retaining wall are to be removed from their present position. The surface will be restored generally to pre-existing site levels in the south eastern part of the site for a distance of approximately 120 metres from the western side boundary of Nos 36 and 40 Goolagong Street and the removal of the fill from this area. The project approval envisages some fill in this area. The return of any fill required for the construction of buildings, access roads and pedestrian pathways as approved under the concept plan approval would be now determined as part of a subsequent project application.

2. Reshaping the stockpile by removing material from the top of the stockpile to return views of the escarpment. The amount of fill to be removed to restore some escarpment views has been determined by detailed analysis of site levels and heights from view points taken at the kerb level in front of a number of key properties identified during the mediation and including No 37 Goolagong Street. The analysis indicated the future stockpile levels necessary to retain some view of the escarpment (Appendix 9).

   The removal of the stockpile also sought to reduce the dominance of the stockpile adjacent to No 36 and 40 Goolagong Street and provide the opportunity for effective stormwater management for the stockpiled material and to improve pre-existing drainage problems experienced by the adjoining landowners.

3. The removed material will be relocated to the western and north western edge of the stockpile in the following manner:

   - The dry rock retaining wall will be relocated partly along the south western side and partly along the north western side of the stockpile to act as a retaining wall for excavated material.

     This retaining wall would be parallel to and adjacent to the gas easement shown on the drawings and to the south of the existing excavation.

   - The fill to be removed and the material to be removed from reshaping the top of the stockpile will be relocated a short distance to behind the new retaining walls and on the western side of the stockpile. In essence the southern part of the stockpile and the fill adjacent to No 36 and 40 Goolagong will be removed and the top of the stockpile relocated to a position away from residents and out of view on the western side of the stockpile.

- Approximately 1,700 cubic metres of excavated material will be removed and relocated within the existing excavated area off Avondale Road. This is in addition to 8,800 cubic metres currently stored in this area.

Approximately 10,500 cubic metres of material to be stored within the existing excavated area for the construction of the approved Stage 1 building will be removed from the site by truck. This will occur as required as part of the construction of Stage 1 of the development.

2.2 Work Methods and Duration

It is proposed that the relocation of the material will occur in stages in order to minimise disturbed surfaces.

Equipment to be used includes an excavator and dump truck similar to the machinery used on site for the placement of the material. A water cart will also be present to spray disturbed areas to control dust. Activities will not include rock breaking or similar activities to break the substrata and the material is already in a form suitable for ready removal. The excavator will load material into the dump truck that will use existing access paths on the western side of the stockpile to access the new storage areas to the north west and south west of the existing stockpile. Where appropriate the excavator will push material from the top of the stockpile directly into the new position.

All vehicles will access the work area from within the site. There will be no access from Goolagong Street or Huntley Road.

The rock retaining wall will be removed one row at a time allowing the material to be removed from behind the retaining wall in sections to maintain the structural stability of the wall. The wall will be removed in stages.

It is proposed that the work would be undertaken during regular construction hours.

Based on discussions with a contractor, it is estimated that the material relocation would take between 3 to 4 months. Allowing for stoppages during adverse wind conditions and undertaking the work in stages to minimise disturbed surfaces, an allowance has been made for a 6 month construction timeframe.

The precise details of the extraction sequence will be a matter for the contractor to determine. However it is anticipated that the rock retaining walls and associated fill will be removed early in the process and relocated to the new position to accommodate the remainder of the stockpile to be relocated.

2.3 Stormwater Management

Erosion and sediment controls will be put in place prior to works commencing and will be designed to manage runoff during the works period and following once the landscaping is stabilised. Stormwater controls have been designed by Valaire and Associates and as shown on the Drawing contained in Appendix 4.

Works have been designed having regard to *Managing Urban Stormwater: Soils & Construction* (4th edition, Landcom, 2004), commonly referred to as the "Blue Book" and include:

- Construction of a sedimentation basin in the south east part of the site discharging to an existing street stormwater pit;

- Construction of a 750mm wide shotcrete dish drain near the boundary of the site adjacent to No 36 and 40 Goolagong Street discharging to an existing street stormwater pit;
- Construction of catch drains at the base of the stockpile to catch stormwater run off and convey to sedimentation basins;
- Extend the existing basin in the northern part of the site and connect to street an existing street stormwater pit;
- Associated works as shown on the drawing.

These works are designed to effectively manage sediment leaving the site and will have the added benefit of improving a pre-existing drainage issue for No 36 and 40 Goolagong Street.

2.4 Landscaping

Disturbed surfaces will be topsoiled and immediately grass seeded in a similar fashion to the existing stockpile. A variety of species will be used as indicated in the Landscape Management Plan contained in Appendix 5. The initial growth species used will by Rye Grass. This has proven to be effective in greening the site and stabilising the surface.

The DoPI requested a landscape plan be prepared. This plan is contained in Appendix 5.

No tree planting or other vegetation is proposed at this stage. This is for the following reasons:

- The site is being returned close to its original levels in the south eastern part of the site. No vegetation other than grasses was present on the site prior to the works. This is consistent with the rural character of the site and it is proposed that the site will be returned to this position.
- The northern sections of Goolagong Street previously had views of the grassed hill site and this will remain with no significant visual impact and no need for screening.
- Planting vegetation will have the potential to block views of the escarpment.
- The provision of the shotcrete drain adjacent to the south western boundary.

It is noted that the concept plan approval identified planting along Goolagong Street frontage and requires the preparation of detailed landscaping plans with each stage to provide additional screening to buildings on the site.

The grass and property will be maintained in a manner appropriate for its rural zoning and will be managed for noxious weeds and asset protection from bushfire and mowed on a quarterly basis. A Landscape Management Plan is contained in Appendix 5.

2.5 Construction Management

Construction management will be managed in accordance with the construction management plans approved by the Department in October 2010 including:

- Construction Management Plan for Stage 1 Specialist and Surgicentre May 2010;
- Community Consultation Communication Strategy – June 2010;
- Construction Noise and Vibration Management Plan – Stage 1 June 2010;

- Construction Traffic Management Plan – May 2010;
- Precinct Development Management Plan – May 2010;
- Revised Sequence Program & Drawings – September 2010.

Works will be undertaken in accordance with the conditions of approval of the concept plan and project application.

In addition to these measures additional specific measures will be put in place in relation to these specific works. These measures include:

Communications:

- Distribution of a notification to residents of Goolagong Street prior to works commencing advising of:
    - when works will commence;
    - the order and duration of works;
    - renotifying the contact number for complaints and enquiries.
- Distribution of notices or contacting residents on a regular basis when works are near residential areas;
- Providing a mobile telephone number of the head contractor on site all times to residents so that information on current or proposed construction activity can be obtained on request.

Dust Management:

The potential for the works to create dust particularly during adverse weather conditions when westerly winds are blowing is recognised. Measures will be adopted to manage dust as indicated in the Dust Management Plan contained in Appendix 6.

Dust generation is expected to be reduced because of the design of the works to limit the transport of material and relocating the higher elements of the stockpile to the west away from residents.

Traffic Management:

All construction vehicles will enter and leave the site via Avondale Street at the existing construction access point and will access work areas from within the site. The relocated stockpile area minimises transportation of material and associated impacts.

Timing of Works

It is proposed that the above works will commence as soon as practicable following approval of the application and will be completed within 6 months.

2.6 Future Use of Stockpiled Material on Site

Where possible all stockpiled material will be used on site or as part of the reconstruction works required to Huntley and Avondale Roads.

The planned use of the stockpiled material is as follows:

- The noise attenuation mound comprises approximately 9,780m^3 of top soil that will be progressively reused as landscaping through the development. This material will be progressively removed prior to occupation certificate for Stage 4.
- The sub soil materials will be used for road construction required for the upgrade of Huntley Road and Avondale Road and for roads and pathways on the site. Allowances for the use of this material are:

Rock amount of base material used from stockpile (in compacted cubic metres)	**Site for use – base material**
1. 10,750	Lot 200 and 202
	Avondale Road from Turnbull Crescent to western perimeter Lot 200
2. 14,500	Stages 2 and 3 buildings
	Avondale Road western perimeter Lot 200 to T intersection Huntley Road
3. 18,900	Stages 5a and 5b
	Huntley Road from Avondale T intersection to eastern perimeter of site
4. 5,800	Stage 5c
	2.5m share way around site
	Internal roads
	Car park and road on gas and electrical easement
Total: 49,950	This total does not include earth used in garden beds or large rock floaters used for retaining walls of garden beds.

These figures have been estimated based on compacted material with compaction required to gain the necessary stability for road and access construction. The material in the stockpile is uncompacted. Allowance has been made for a bulking factor of 1.5. Consequently the use of 49,950 cubic metres of material when compacted results in 74,900 cubic metres if uncompacted.

The allowance for reuse of the stockpiled material is as follows:

Available Material (uncompacted)	**m^3**
Stockpile	72,800
Fill	2,300
Mound	9,780
Excavation	8,800
Total	93,680

Allowed Uses	**m^3**
Allowance for road construction etc	74,925
Top soil reused in landscaping	9,780
Taken off site	10,500
Total	95,205

An allowance has been made for taking approximately 1,500 cubic metres off site that is required to achieve a balance of cut and fill. This will allow for some further minor excavations for services and footings and the like.

The amount of material required to be used on site would be determined at the detailed design and construction stage. The above allowances have been made based on information to hand. However, the proponent commits to removing all stockpiled material by using it on site or by removing it off site prior to the issue of an occupation certificate for the completion of Stage 5 of the development.

There are a number of benefits in the excavated material remaining on the site for reuse. This is a more sustainable and efficient outcome and one that has less overall environmental impacts. This outcome is consistent with the objectives of the approval and the reasons for conditions to the approval. It is the best outcome for the environment with the modifications outlined above addressing community concerns.

It is also considered that achieving a better balance of cut and fill is consistent with the objects in section 5 of the Environmental Planning and Assessment Act, particularly section 5(a)(ii) relating to the promotion and coordination of the orderly and economic use and development of the land. It encourages sustainability and prevents the degradation of the environment by means such as the following:

- Encouraging the reduction of the use of materials.
- Encouraging the re-use and recycling of materials.
- Encouraging material recovery.

Rather than transport material off site, material has been retained on site for future use as it was determined to be a valuable resource for slab and road base. The overarching objective of the proponent in relation to the management of excavated material and its storage on site is to achieve a balance of cut and fill over the site over the life of the project. This is considered a desirable objective for the development and one that is totally consistent with objects of the Act. It prevents off site transport of excavated material (to and from the site) and the additional impacts and emissions associated with such transport. In this regard it is noted that the reason for the conditions imposed on the project approval included the encouragement of ecologically sustainable development, protecting the amenity of the local area and adequately mitigating environmental impacts of the proposal. A balance of cut and fill over the site achieves these outcomes.

3. ASSESSMENT OF KEY ENVIRONMENTAL EFFECTS

3.1 Visual Impacts

The visual impacts of the concept plan and the project application were addressed in the Environmental Assessment that accompanied the applications and in the Director General's assessment report. The DGs assessment report notes that:

> *the proposed building intensity would be a substantial change to the current rural and low density residential character of the surrounding area. However, as the area is identified for redevelopment as part of the West Dapto release area, the rural character of the site and surrounds is expected to transform to an urban character over time.*

and

> *Some houses in the neighbouring residential area of Penrose, have views to the Illawarra Escarpment, looking across the site. These views would be lost or reduced if the precinct is developed.*

While the loss of these views is significant, the Department notes that the area would eventually be developed as part of the West Dapto release area and consequently the view would change and is likely to be lost with any development on the site (even low scale development.

3.1.1 Pre-Existing Visual Context

The pre-existing topography of the site is shown on the plan contained in Appendix 7. This shows an existing ridge on the site running generally north to south with a height to approximately RL49 metres. The site slopes away from this ridge to the east, west and north west.

The topography continues to fall to the east to Goolagong Street and beyond with the dwellings on the eastern side of the street being lower than street level. This accentuates the impact of the existing ridge on views to the Illawarra escarpment.

The site is traversed by high voltage transmission lines with steel towers located on the site and on adjoining sites.

There are few photographs of existing views from properties on Goolagong Street. Photo 1 is an early photo of a view from within No 37 Goolagong Street supplied to the Department by the resident. Photos 2 and 2 were obtained from the Environmental Assessment.

Google Streetview contains helpful images that are useful in this regard as they present images taken before the earthworks were undertaken. These images are taken from a point approximately 3 metres above street level and thus exaggerate the actual view from a pedestrian of resident whose property is lower.

Photo 1 - View From Inside No 37 Goolagong Street (old photo)

Photo 2 - View From Around No 23 Goolagong Street with Existing Ridge Screening Views of Escarpment

Photo 3 - View from Corner of Goolagong Street and Penrose Drive showing Views to the North and West

The above material indicates that there are more distant views available of the escarpment to the west and north west of the site from Goolagong Street to the east of the site as evidenced by Photo 1 above taken from within No 37 Goolagong Street. Moving north, the view of the escarpment reduces due to proximity to the existing ridge on the site as can be seen in Photo 2.

Towards the northern end of Goolagong Street nearer to the intersection of Penrose Drive, the views open to the north again revealing the escarpment to the north west of the site extending to Mt Kembla and Mt Kiera.

Views from properties to immediate east of the site (Nos 36 and 40) are influenced by the lower level of these sites, the existing fence lines and the existing ridge on the site. Pre-existing views to the escarpment would have been in a westerly and south westerly direction where not screened by the site and by other local topographical features such as the foothills of Marshall Mountain.

3.1.2 Existing Visual Context

The photos contained in Appendix 2 show the existing situation. The stockpiles and the rock wall are evident with the stockpile and acoustic mound appearing as a vegetated grass bank similar to the pre-existing ridge on the site.

3.1.3 Impacts of Proposed Works

The further works have been designed by the project surveyor such that the proposed survey levels will return some views of the escarpment when viewed from the street. Views from the street and properties along that part of inside private properties would be greater because of the increased setback and the resulting greater exposure of the escarpment.

It is important to note that this returned view will be temporary because, as indicated by the graphical presentations contained in Appendix 8, this view would be removed by the construction of the approved development and the expected additional landscaping on Goolagong Street and the site. Such views would also be removed by any residential development on the site as envisaged under the West Dapto release area.

The impacts of the works on more substantial views from the southern end of Goolagong Street are shown on the series of detailed cross sections contained in Appendix 9.

These six cross sections indicate the extent of the view of the escarpment returned. The views returned by the proposed works are compared with the existing view line determined from the drawing of the existing situation and the previous view line determined from the original site contour survey. In all view points the return of the view is significant with almost the total view returned. This is because the proposed works re-establish the existing ground levels in the south east part of the site. When viewed from Goolagong Street heading west and from the properties fronting this street around to No 29, views are mostly returned.

From 27 Goolagong Street heading north, views of the escarpment across the site were minimal because of the screening provided by the ridgeline on the site. Towards the northern end of Goolagong Street, existing views to the north and north west are not affected to any real extent.

Consideration has been given to the preparation of photomontages to indicate the extent of view returned as a result of the works. This is a difficult exercise because such montages are typically prepared from a photograph of the existing situation marked with the image of a proposed development. It is not possible to prepare a montage based on an existing photo with development in the foreground removed.

Consideration has been given by the Craven Elliston and Hayes, surveyors, and BBC Consulting Planners to the amount of the view from inside No 37 Goolagong Street from a photo supplied by the resident (Photo 1 above). It is estimated that this view would be effectively completely returned.

At the northern end of Goolagong Street there would be little change to the existing view with the exception to the distant view down Goolagong Street. Before and after images as close as possible are shown in the following photos.

Photo 4 - View from Corner of Goolagong Street and Penrose Drive showing Views to the West – Before

Photo 5 - View from Corner of Goolagong Street and Penrose Drive showing Views to the West – After

As can be seen in the photos contained in Appendix 2, the views of the grassed and stabilised bank are not dissimilar to the previous views and are typical of the pre-existing visual character of the area.

3.1.4 Conclusion

It is concluded that the proposed works will result in a substantial return of existing views. This is considered acceptable. It is considered more than acceptable in the context of the conclusions of the environmental assessment and the consideration of the concept plan and project application that conclude that these views would be lost by development likely to occur upon release of this land for development as part of the West Dapto Release Area and as a result of the implementation of the approved concept plan.

3.2 Traffic

The concept plan and Stage 1 project, together with the construction sequencing and management plans submitted to the Department and approved in October 2010, envisaged the excavated material will be removed from the site with retention on site where required for reuse.

The approval resulted in conditions requiring construction of roads off site and provided the opportunity for the reuse of more material on and adjoining the site to minimise the impacts of removing spoil from the site.

Based on the calculations of material to be removed from the site, it is estimated that the removal of 10,500 cubic metres of fill from the site would result in approximately 700 truck trips, based on a truck capacity of 30 tonnes and a spoil density of 2 tonnes per cubic metre.

A disposal point is located to the west on Huntley Road approximately 3 kilometres from the site. Other disposal locations are possible depending on end user requirements. It is envisaged that any truck movements would be via Avondale and Huntley Roads. These truck movements were envisaged in the project approval.

3.3 Noise and Dust Management

Dust management measures are contained in the Construction Management Plan approved by the Department in October 2010. Additional measures specific to the works envisaged in this application are contained in Appendix 5.

With the implementation of these measures, all reasonable steps will be taken to control dust emissions. Key to this is the restriction on works in the winter months when westerly winds are prevalent. Complaints handling procedures are proposed to ensure an effective means of communicating issues and taking ameliorative action.

The noise impacts of excavation and movement of spoil were assessed in the noise impact assessment accompanying the concept plan and project application.

Noise predictions undertaken for the Environmental Assessment indicates exceedance of the established construction noise goal of up to 6 dBA is predicted for excavation work.

A range of possible approaches to reducing the impact of construction noise were identified in the assessment and include:

- *Operator Instruction – Operators should be trained in order to raise their awareness of potential noise problems and to increase their use of techniques to minimise noise emission.*
- *Equipment Selection - All fixed plant at the work sites should be appropriately selected, and be in good working order. Any plant that is faulty and exhibiting excessive noise should be fixed or replaced with an item of plant that is in good working condition.*
- *Site Noise Planning - Where practical, the layout and positioning of noise-producing plant and activities on each work site should be optimised to minimise noise emission levels.*
- *Community Liaison - liaison should be maintained between the communities overlooking the work site and the parties associated with the construction works to provide effective feedback in regard to perceived emissions.*

Work will be undertaken during normal construction hours and equipment will be located near dwellings for the minimum time possible.

4. CONCLUSION

The modification to the project approval seeks to include additional conditions to the project approval to bring clarity to the proposed method of managing excavated material and to resolve on-going issues with the project with elements of the local community.

In short it seeks approval to works to relocate excavated material placed on the site to a different location and associated stormwater management works. These works are designed to return views of the escarpment and to install appropriate erosion and sediment controls.

The proposed works will result in some impacts associated with excavation activities including dust and noise. Additional measures are proposed to ensure that these impacts are minimised and managed as much as possible.

Disturbed areas will be landscaped in a manner consistent with its rural location and the cleared existing nature of the site.

Stormwater management works are proposed consistent with *Managing Urban Stormwater: Soils & Construction* (4th edition, Landcom, 2004).

Although these will be some short term construction impacts, the modifications will return views of the escarpment and will provide stormwater management controls consistent with current standards.

APPENDICES

APPENDIX 1

Existing Site Survey

APPENDIX 2

Existing Site Photos

APPENDIX 3

Plan of Proposed Works

APPENDIX 4

Stormwater Management Plan

APPENDIX 5

Landscape Management Plan

APPENDIX 6

Dust Management Plan

APPENDIX 7

Site Contour Plan Prior to Works

APPENDIX 8

Outline of Proposed Development

APPENDIX 9

Visual Impact Assessment Cross Sections