

Construction Management Plan

*Cnr Epping & Herring Roads
Proposed Residential Development
June 2013*

CONSTRUCTION MANAGEMENT PLAN PART 3A APPLICATION



STAMFORD

PROPERTY SERVICES PTY LIMITED

Introduction

Construction Management Plan

Stamford Property Services Pty Limited has prepared this Construction Management Plan (CMP) in response to the Director General Requirements (DGR's) issued on 25th November 2010.

The CMP summarises the policies and procedures that will be put in place by the contractor throughout the duration of the project to ensure the construction processes do not create unacceptable levels of disturbance to the community.

The CMP's principles discussed in this document will be implemented across each stage of the proposed development. The principles outlined in this document will be further refined and detailed in a site specific construction methodology for each stage of the development prior to works commencing.

All proposed methodologies and systems will be implemented in accordance with the Ministers determination for the site and the appropriate authorities. This methodology is to be read in conjunction with the following reports:

- ~ Construction Traffic Management Plan – Prepared by Traffix
- ~ Acoustic Report – Prepared by Acoustic Logic

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Site Management / Staging Areas

(Section to be read in conjunction with:

• Architectural drawings prepared Allen Jack+ Cottier, drawings DA000 to DA4100 and specifically the staging diagrams on drawing DA0100.

Stage 1 – Demolition of the existing hotel along with basement works to the entire site. The construction of the access road and four residential buildings.

Works – Demolish existing hotel and construct the basement car park for the entire project so there is no need to bring in heavy machinery after the first stage is complete.

- Construction of buildings Adelaide, Brisbane, Darwin and Perth.*
- Construction of the new access roads.*

Access

(Refer to Construction Traffic Management Plan prepared by Traffix dated December 2010.

The construction access plans (DA 0100 Issue C) highlight the staging of construction access proposed for the development.

In summary the basement and podium deck will be the first structure on site, which will be accessed directly off Herring Road where a construction access will be cut in adjacent to the existing concrete driveway. This will also be the future cross-over point for the proposed road reserve.

Appropriate traffic management plans shall be developed for each stage to manage the pedestrian and traffic flows onto and off the site in a safe manner.

Privacy & Surrounding Amenity

The site will be fenced off with a standard temporary fence 1.8metre high. The fence will have shade cloth placed on it to minimise the amount of air borne material leaving the site throughout the excavation and construction stages of the development. Further the building will be fully scaffolded and enclosed with chain mesh to prevent any materials being blown off the building site. All works on the site will be carried out in accordance with the approved hours of work (to be stipulated in the conditions of approval by the Minister). At no time will site personnel be permitted to access the site via neighbouring properties. Vehicle deliveries will be via a designated construction access point at all times.

Pedestrian access along Epping Rd and Herring Rd will be maintained at all times throughout construction by the delineation of such with a construction fence. The footpaths will be checked at a regular basis to ensure they have not been affected by any works relating the redevelopment of the site.

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Environment

Soil erosion and sediment controls shall be developed prior to the issue of a construction certificate and will generally follow the Meinhardt report requirements submitted with the EA. These measures will be implemented prior to commencement of work on the site. They shall be inspected on a regular basis in accordance with the contractor's site management policies. In addition to this the sediment control measures will be inspected following extended periods of inclement weather to ensure they remain in fully functioning condition. The aim of the controls is to ensure any water leaving the site is maintained at the desired levels of quality to reduce the impacts on the surrounding watercourses. Any material stockpiled for an extended duration on site shall be covered to prevent the material becoming air-borne in adverse weather conditions.

Work on site will also be monitored in conditions of high wind to ensure unacceptably high levels of dust are not being created. In such circumstances the works creating the dust shall cease until more suitable conditions prevail. Areas subject to dust creation will be 'watered down' on a regular basis, where continued periods of high wind exist. The access points would also be constructed with 'shaker grids' to assist in preventing dirt and debris from being transported onto the surrounding road network. In addition to this in times of inclement weather site personnel will wash down vehicles leaving the site to further prevent dirt contaminating the surrounding street network.

Throughout the excavation phase of the construction sequence the adjacent and surrounding streets will be cleaned by a street sweeper as required to further assist in keeping the surrounding road network clean. All transport leaving the site will be monitored by site personnel to ensure loads are covered before exiting onto the surrounding street network. In addition to these measures it will be the intent of Stamford/ and or it's builder to minimise the impact on the surrounding environment by restricting the amount of the surrounding land utilised throughout the construction process (this will be only in the form of easements and/ or services connections) and thereby reducing the amount of land disturbed by the construction process that could be subject to erosion. As part of the site establishment all trees nominated to be retained on site will be protected to the relevant local council standard and in accordance with the concept plan/ Stage 1 arborist report recommendations. All works around these protected trees will be closely monitored to ensure the works do not adversely affect the health and integrity of the protected trees. Excavation works adjacent to protected tree species will be overseen by an arborist to ensure tree roots protruding beyond the zone of protection are treated in the appropriate manner.

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Site Accommodation

Stamford/ and or it's builder currently proposes two accommodation set-up locations for each stage of the development.

1. Accommodation will be established on land adjacent to each stage whilst the site is excavated and the first levels of structure built. Accommodation will be provided in accordance with industry practice for amenities, change facilities and lunch rooms. In addition to this Stamford/ and or it's builder will establish a site office in a prominent location to ensure all visitors and workers new onto the site are able to locate the site office to attend the site induction prior to commencing on site.
2. When the structure of the basement levels are able to be stripped of formwork and cleared, the accommodation for the site will be transferred into the basement levels. The accommodation will remain in the basement levels until the completion of the project.
3. It is anticipated that site personnel will travel to the site by one of the following means:
 - i. Public transport – Rail and bus network hubs sit in close proximity to the site (Macquarie University station & Macquarie University / Macquarie Centre bus exchange).
 - ii. Pedestrian access – for workers living in close proximity to the site.
 - iii. Cycling – small numbers of workers may cycle to the site.
 - iv. Personal vehicles – parking to be located off site on the surrounding council road network. This will be subject to parking restrictions around the area therefore may encourage contractors to use non-vehicle means of travelling to work.

Waste

Stamford/ and or it's builder's commitment to the environment extends to its treatment of waste materials on the site. Stamford/ and or it's builder will seek to reduce the volume of waste transferred to land-fill through the implementation of a management process on site. This process will be developed and monitored in accordance with the successful contractors site management policies.

Stamford/ and or it's builder will work in close conjunction with the architect to ensure products selected for the site are not only suitable for use, but also supplied with a view to reducing the volume and type of packaging the goods selected are supplied in. This process extends to ensuring quantities ordered do not generate excessive waste, nor have a negative impact through in-efficient multiple deliveries.

Stamford/ and or it's builder will engage a waste contractor that is capable of ensuring all waste removed from the site is sorted at the waste depot for recycling / re-use. Reports

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will be requested on a monthly basis from the waste contractor to ensure the re-cycling and re-use targets are being achieved.

Waste materials on site will be restricted to the bins provided at all times. At no point on the project will stockpiles of waste materials be permitted. In general bins 9m³ – 15m³ will be used at the ground level to collect the waste. These larger bins will be fed by smaller bins lifted from the working floors and emptied by crane or forklift on a regular basis. Larger waste bins will be exchanged once full. Full bins are to be covered at all times when they are being transported on the public road network.

The Waste Management Plan for the operation of Stage 1 is on a separate cover.

Materials Handling

Movement of materials around the site will be conducted utilising the following means: Cranes – mobile cranes will be used in the initial stages of the construction of the structure where sufficient staging areas are available adjacent to the site. When practicable a tower crane will be erected to service the project.

The tower crane will be positioned on the project to ensure site coverage is maximized to reduce the need to establish secondary mobile cranes on the site. Retracting landing platforms will be installed to aid the movement of heavy materials on and off the leading levels of structure. Each building will also be serviced by a 'man and materials' or 'materials only' type hoist to transport workers vertically up the building. These hoists will also be used to transport smaller materials onto the working floors.

The location of the hoists will be so designed to travel the full height of the building and may have the ability to service the basement levels. Materials delivered to the site on pallets will be lifted onto the floors by either the crane or hoist.

They will be moved around each floor to the work face by either electric or manual pallet trolleys. The unloading of trucks will be carried out by forklift or 'Manitou' type all terrain forklifts. All unloading of materials will be done off the public road system (i.e. on site) to prevent congestion of the surrounding road network. Materials shall be stored in the areas nominated as materials handling zones and (once cleared of formwork) the basement levels. Any combustible liquids will be stored in the appropriate security cages with the appropriate safety measures in place.

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Noise Management

The management of noise on site must consider two different but equally important factors. These are the general public and the workers responsible for the construction on site. Stamford/ and or it's builder shall implement the monitoring and control procedures noted in the acoustic report for the site prepared by Acoustic Logic. In addition to this the approved hours of work will be adhered to at all times to reduce the impact of the construction process on the occupants of the surrounding properties. The builder shall establish a noise management policy specific to the Herring Road development site. This is a vital element in the induction process of workers on the site to ensure individuals are aware of the dangers of long term exposure to excessive levels of noise.

Sequencing / Programming the Project

The table below summarises the stages of the proposed development. Each stage will be subject to planning approval by the relevant authority. Commencement of each stage will also be subject to market demand for the proposed residential product. In each case the construction management principles outlined above will be implemented across each of the stages. Stamford prides itself on its strong safety record and positive reputation in both the construction sector and the general public. It is the intent of Stamford/ and or it's builder to undertake the proposed works to the highest standards possible.

Stage	Stage Summary	Stage Details
Stage 1	Demolish Existing Hotel and Complete Basement Works.	• Create construction access and fence the site making it safe • Utilise existing sewer, water and power of current facilities on site • Demolish existing hotel and facilities • Excavate and complete basement works
	Construction of Stage 1 Buildings and Courtyard	• New sewer extension to rear main sewer - inclusive easements (as required). • Utilise existing water and power of current facilities on site. • Construction of buildings Adelaide, Brisbane, Darwin and Perth. Completion of through site links from Epping Rd.

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Stage 2	Completion of the remaining buildings, landscape area and public domain/ through site links.	• Completion of the remaining buildings. • Complete remaining landscape areas including the gym facilities. • Completion of the through site links for public access and removal of all construction fencing

Project Completion

Stamford will ensure that each of the stages is developed in accordance with all approvals. Stamford is proud to be associated with the staged development on Herring Road and will seek to ensure the construction process has no impact on the adjoining properties and the surrounding environment.

Critical project issues such as tree protection, environmental and noise control requirements are to be identified prior to commencement and highlighted with all sub-contractors throughout the construction period taking into account the recommendations and procedures in this report. Stamford will ensure that the management of the construction process on site is managed in accordance with all approvals right through to the point of occupation of each of the buildings.

The successful contractor will compile a detailed Construction Management Plan for each separate stage to deal with site specific issues prior to the commencement of work on those stages. Stamford fully acknowledges that the long term success of the development is very much reliant upon creating a completed built environment that is attractive to future residents and sympathetic to the surrounding natural environment. It must also be sympathetic to the site surrounds throughout the development process.

As there will be a dedicated construction entrance to the development once stage 1 is complete owners will use the dedicated stage 2 road for entry and exit, there will also be a construction fence separating stage 1 and stage 2 with fabric installed on it to minimise dust and other impacts. As the car park will be built in its entirety during stage 1 works there will also be fencing installed so as to limit the use of the area.

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Appendices

~ **Construction Staging Plans prepared by Allen Jack + Cottier –**
Refer to architectural drawings DA0000- DA 3632 and specifically DA0100 Issue C.