



AURORA PROJECTS
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WESTERN AUSTRALIA DEPARTMENT OF HEALTH
**New Busselton District / Sub Regional
Hospital and Community Health Centre**

**SUMMARY REPORT- SITE
EVALUATION**

Summary of reports from:

- 1/ Community Consultation (Estill & Associates)
- 2/ Technical Evaluation of Site Options (Sinclair Knight Merz)
- 3/ Financial Evaluation (PricewaterhouseCoopers)



Disclaimer

Aurora Projects has prepared this report for the Western Australia Country Health Service in accordance with its contracted role as Project Director for the capital works program for country health services in W.A.

The brief required Aurora to co-ordinate the evaluation of identified building sites in the Busselton/Vasse/Newtown area and assess each site for suitability for the construction and operation of a new/upgraded public hospital with capacity for 75 inpatient beds, the potential for synergy with the private sector and the potential for future expansion (the Particular Purpose).

This Summary Report deals with those sites identified as being potentially available and suitable for the Particular Purpose.

All statements in this report concerning each site must be interpreted in the context of the assessment of suitability for the Particular Purpose.

No statement concerning any site should be interpreted or re-stated in isolation or in relation to suitability for any other purpose.

This report does not include any statement concerning a site or assess any site for any purpose except the Particular Purpose.

This report has Commercial in Confidence status.

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1. EXECUTIVE SUMMARY

This report has been prepared by Aurora Projects as a summary of reports prepared by Estill and Associates, Sinclair Knight Merz (SKM) and PricewaterhouseCoopers (PwC) in relation to a site evaluation process for the Busselton District Hospital redevelopment.

1.1 Study Outcomes

Key information flowing from the site evaluation process is summarized below.

1.1.1 Service Requirements

Analysis of activity projections indicates the need, in 2016, for a public hospital with access to approximately 75 beds together with the usual support services. The service needs analysis also indicates that, whilst there is insufficient demand for a private hospital to be co-located with the public hospital, there is potential for medical suites, consulting rooms and residential aged care services to be co-located.

A private residential aged care provider with an approved license for 95 aged care beds in the Busselton area has offered to build 20 intermediate care beds, co-located with the public hospital on the Vasse sites - this would reduce the need for public hospital beds by about 10.

Interest from other potential private aged care providers in a co-location model on the preferred sites has not been tested.

Inpatients seeking treatment in a private hospital will continue to access services in Bunbury and Perth.

1.1.2 Community Consultation (Estill and Associates)

A total of 978 submissions were received during the public consultation process. 73.3% of these (656) supported redevelopment of the existing site over a move to Vasse Newtown. Significant themes in these submissions included:

- The hospital should provide additional services and facilities based on identified needs of the area without loss of the community-operated hospice.
- The service model could include co-location at the current or alternatives sites but should deliver optimum care, efficiently and effectively, now and in the future.
- The hospital should complement existing facilities and not affect the staffing of other local hospitals.
- The hospital should be readily accessible from main roads and the airport, and for ambulance access, and should not be so far from population centres such that local doctors, patients and volunteers are discouraged from attending.
- There would need to be clear benefits to the community, including improved health outcomes, to justify a relocation of the hospital from its current site.
- The selected site should be large enough to meet future demands and any relocation should leave the current site in public hands.

Although there was concern that the site had already been selected the stakeholders were interested in the decision making process and wanted the consultation to occur

1.1.3 Technical Evaluation of Site Options (SKM)

A total of nine sites were evaluated, however only four were considered by the Technical Working Group to have sufficient positive characteristics to warrant further consideration in the financial evaluation. The sites considered by the Technical Working Group to have potential to accommodate a hospital subject to further

investigation are at Vasse Newton (two sites- A1 and A2), the existing hospital at Busselton (Site B) and the former abattoir site (Site C). From this analysis, SKM have identified that:

- further assessment will be necessary to fully understand the risks associated with the development of all sites
- all four sites have a number of significant disadvantages which can be addressed through proposed mitigation strategies or by undertaking a risk quantification process
- two sites (A2 and C) require significant planning/rezoning action and two sites (A2 and B) require follow up action regarding potential issues related to endangered species (Western ring-tailed possum), however, as planning, detailed design and tender documentation is expected to take 18 months for all of the short-listed sites, there is ample time to address these rezoning/environmental issues
- flooding and/or tidal surges are a potential issue for all of the sites, either directly or as a consequence of access restrictions during flooding events
- the sites have been evaluated in terms of a 1 in 100 year flood event, however the Department of Water has requested that the hospital be designed with reference to a 1 in 500 year flood event - this would require a detailed hydrological study (all sites)
- Site B (existing hospital) is ranked higher than any of the other sites in most criteria groupings (4 out of 6 groupings) followed by site A1 (2 out of 6) and SiteA2 (equal with SiteA1 in 1 out of the 6 groupings).

1.1.4 Building Options

A range of building options have been prepared for all sites, with 65 bed sub-options prepared for the Vasse sites. The full range of building options for the four preferred sites identified are:

Vasse Newtown (Site A1) - four multi-storied options identified as:

Option A1 - 1 - 75 bed new build without kitchen/laundry (with kitchen and laundry service provided by the co-located aged care operator)

Option A1 - 2 - 75 bed new build with kitchen/laundry

Option A1 - 3 - 65 bed new build with kitchen/laundry (with aged care operator providing 20 intermediate care beds)

Option A1 - 4 - 65 bed new build without kitchen/laundry.

Vasse Newtown (Site A2) - four single level options identified as:

Option A2 - 1 - 75 bed new build without kitchen/laundry

Option A2 - 2 - 75 bed new build with kitchen/laundry

Option A2 - 3 - 65 bed new build with kitchen/laundry

Option A2 - 4 - 65 bed new build without kitchen/laundry.

Existing Hospital Site (Site B) - three development options identified as:

Option B - 1 - refurbish/expand existing as 75 bed single level hospital

Option B - 2 - 75 bed new build as a single level hospital

Option B - 3 - 75 bed new build as a multi-storey structure.

Former Abattoir site (Site C)

Option C - 75 bed new build solution as a single level facility with kitchen and laundry.

1.1.5 Site and Building Options- Summary of Costs (PwC)

An assessment of construction costs for the various options indicates that the top seven performing capital cost options cover all the building options for Site A2 and Site B and range in cost between \$58.3m. and \$64.1m., using nominal capital costs

(refer *Table 1*). These sites perform better largely because there are no site acquisition costs

The most expensive nominal capital cost option is Option C at \$89.4m

Table 1: Nominal Capital Costs

NOMINAL CAPITAL COSTS			
Site/Building Option	Site Acquisition Costs (\$m)	Construction Costs (\$m)	Total Capital Cost (\$m)
Site A1 -1	18.0	61.7	79.7
Site A1 -2	18.0	63.3	81.3
Site A1 -3	18.0	60.5	78.5
Site A1 -4	18.0	58.8	76.8
Site A2 -1	-	61.0	61.0
Site A2 -2	-	62.5	62.5
Site A2 -3	-	59.8	59.8
Site A2 -4	-	58.3	58.3
Site B -1	-	58.4	58.4
Site B -2	-	61.7	61.7
Site B -3	-	64.1	64.1
Site C	30.0	59.4	89.4

Note: The nominal capital costs (including site acquisition costs) for the site/building options were adjusted to a net present cost (NPC) for comparison purposes. No adjustment to capital costs has been made for the realization value of the existing site due to the many risks which may affect or even prevent the sale. The realization value of the site ranges between zero and \$27m.

1.1.6 Risk Analysis

Many capital and operating risks have been identified in the PwC report. In this, it is significant to note that the operational risks, when quantified, were of greater significance than the capital risks.

The most significant operational opportunities (and hence risks) relate to the cost benefits projected for the Vasse sites arising from co-location with a private aged care operator. These savings could be achieved as a consequence of reduced bed-day costs for sub-acute patients, shared (or contracted) support services such as catering, linen, maintenance, and potentially, contracting of clinical support services such as allied health and medical imaging. It is important to note that there has been no firm financial offer received from the potential co-located aged care operator and, consequently, these potential savings remain as preliminary estimates that are yet to be confirmed.

Operating cost differentials for each site/building option over the life of the project (25 years) together with identified risks for both capital and operational factors have been quantified, adjusted to nett present cost (NPC) values and added to the raw NPC capital costs to give total NPC adjusted costs (refer *Table 2*).

Table 2: Total Final Net Present Cost of All Site/Building Options

Site/Building Option	Total Adjusted Costs (\$m)
Site A1 - 1	79.5
Site A1 - 2	80.5
Site A1 - 3	68.7

Site A1 - 4	67.3
Site A2 - 1	62.2
Site A2 - 2	63.1
Site A2 - 3	51.4
Site A2 - 4	50.2
Site B - 1	57.6
Site B - 2	59.2
Site B - 3	61.0
Site C	87.2

1.2 Study Conclusions

Detailed technical and financial evaluation of the identified sites indicates that the superior site/building options utilising NPC adjusted costs (incorporating all identified costs, including capital and operating risk adjustments) are ranked as:

- (1) \$50.2m for Option A2 - 4 (Vasse) - single level, with 65 public beds, no kitchen/laundry and the purchase of non-acute services from a co-located private sector residential aged care operator (10 bed equivalent)
- (2) \$51.4m for Option A2 - 3 (Vasse) - single level, with 65 public beds, kitchen and laundry and the purchase of non acute services from a co-located private sector residential aged care operator
- (3) \$57.6m for Option B - 1 (Existing Busselton Site) - part refurb/part new, with 75 public beds, kitchen and laundry and with all services provided "in-house"
- (4) \$59.2m for Option B - 2 (Existing Busselton Site) - all new, single level, with 75 beds, kitchen and laundry and with all services provided "in-house".

As noted above, the Vasse sites gain significantly from the assumed benefit of co-location with an aged care operator. The possibility of a similar model being applied to other sites has not been investigated. However, the Vasse licensee has indicated an unwillingness to consider other sites.

A number of risk factors have been identified that could reduce the operational efficiencies suggested for the co-location model. These include over-estimation of the volume of hospital activity that could be contracted to intermediate care beds in the aged care facility, inability or unwillingness of the aged care operator to deliver the expected savings and/or to sign a service agreement, together with the long term viability of the aged care operator.

There may also be potential for the public hospital to arrange its services such that sub-acute patients are cared for in a similar intermediate care facility, thereby generating similar operational savings.

It is apparent that the real deciding issue in selection of an appropriate site for the new Busselton hospital facility is the potential opportunities that may be created by a co-located aged care facility. Should these be achieved Vasse Newtown offers substantial advantage. Opportunities identified by the aged care operator include the potential for patients to move between the various levels of care (both aged and acute), improved financial management through the availability of "flexible" intermediate care beds that are more cost effective to operate, enhanced economies of scale through shared "back-of-house" services, efficient utilisation of acute public hospital beds for the purposes funded by the State Government, and some capital savings associated with reduced public hospital bed numbers.

2. BACKGROUND

2.1 Introduction

This report has been prepared as a summary of reports prepared by Estill and Associates, Sinclair Knight Merz (SKM) and PricewaterhouseCoopers (PwC) in relation to a site evaluation process for the Busselton District Hospital redevelopment.

Estill reported on the outcome of community consultations, SKM on the technical evaluation of site options and PwC on the financial evaluation of each site/building option.

2.2 General

On 24 October 2005, the Minister for Health, Jim McGinty announced that \$65m would be made available for development of a new Busselton District Hospital (BDH). The Minister also advised that a community consultation period of three months would occur and that this would involve the Department of Planning and Infrastructure and the Shire of Busselton.

A significant issue for delivery of health care services at Busselton is that the Busselton Local Government Area (LGA) had a population of 25,600 in 2004 with an expectation that this will increase to 33,300 in 2016 and to 36,500 in 2021¹, an increase of 42.6% over the period 2004-21. Inclusion of the adjacent LGA of Augusta- Margaret River increases the potential population to be serviced by BDH to 53,100 in 2021.

2.3 Proposed Role of Busselton District Hospital

BDH is an integral part of the acute hospital network in the South West. The network is based upon Bunbury Regional Hospital (BRH) as the regional resource centre and primary referral hospital. It is intended that the role of the new Busselton Hospital will be as a sub-regional centre with referrals for patients requiring higher level services being to BRH or the metropolitan area, as necessary. Smaller hospitals at Augusta and Margaret River are expected to continue treating local patients and refer to BDH, BRH or metropolitan hospitals according to bed availability and/or clinical need.

2.4 Proposed Service Model

The proposed service model for BDH will target a reduction in reliance on inpatient services by placing greater emphasis on community based services, ambulatory services and health promotional programs through a range of service providers.

This approach is designed to complement the research outcomes of the longstanding longitudinal health study being undertaken on the Busselton community under the direction of the University of W.A. This study has been highly acclaimed and valued by people both within and outside the Shire. It is intended that the new hospital development should support continuation of the study and the role of general practitioners (GP's) who have played an important supporting role in maintenance of the research program.

Currently, the majority of patients admitted to BDH are under the care of GP's. It is expected that, as a consequence of population growth and ageing, a number of specialists will be attracted to the area, particularly in core surgical specialties. However, local GP's will continue to provide the bulk of referrals and remain the core

¹ DPI population forecasts

medical workforce. The referral patterns of the acute hospital network are not expected to change.

There is potential for some specialists to attempt to provide a “fly-in/fly-out” service leaving the “on-call” commitments and patient follow-up to the local resident GP’s or to the specialists based at Bunbury. Should this occur, arrangements would be put in place to mitigate any risks associated with this approach.

2.5 Projected Service Requirement

It is expected that about 75 public hospital beds will be required in 2016, compared with an earlier estimate of 48 beds. This increased requirement is the consequence of revised population projections over a longer time frame (now 2016, previously 2011) and a reduced assessment of the number of patients seeking treatment in the private sector.

Previously it had been thought that there was significant potential for private sector involvement through a possible Private Public Partnership (PPP). It is now apparent that the only significant private sector interest relates to provision of aged care services, including up to 20 intermediate care beds. However it remains possible that, at some point in the future, the acute private health sector may register an interest in providing day procedures in the new BDH.

The St. Ives Group has received Federal government approval for 95 aged care bed licenses in the Busselton area and has proposed that, as part of a development ofon the Vasse site, it would be prepared to fund the capital cost of a 20 bed intermediate care facility. This facility would be available to the public hospital for the purchase of services for patients requiring lower level care.

This proposal has not been tested in a competitive market situation and this process may identify that other aged care providers might have a similar interest. Further, a similar model may well be possible on the other sites (other than the Vasse proposal) with other aged care providers.

It is envisaged that, should contracting of intermediate care to an aged care operator occur, these beds/services would be managed as an integral part of the broader health care continuum.

3. SITE EVALUATION

3.1 Introduction

In December 2005, when the community consultation began, only two sites, (the existing hospital site and a Vasse Newton site to the western side of the Bussell Highway bypass and east of the Buayanyup drain), had been identified as potential locations for the new hospital. The existing Hospital and Vasse Newton sites were also the subject of extensive community consultation undertaken by Estill & Associates. Since commencement of the community consultation process, a further 7 possible sites were identified (some as a consequence of the community consultation), giving a total of 9 potential sites, being:

- Vasse Newtown (Site A1)
- Vasse Newtown (Site A2)
- Existing Hospital site (Site B)
- Former Abattoir site (Site C)
- Ambergate Subdivision (Site D)
- Layman Road (central Busselton) (Site E)
- Provence Subdivision, Site 1 (Site F1)
- Provence Subdivision, Site 2 (Site F2)
- Dunsborough Lakes South (Site G)

These sites have all been the subject of a detailed technical assessment undertaken by Sinclair Knight Merz. From this assessment, Sites A1, A2, B and C were short-listed and were subjected to detailed financial evaluation. This included the costing of a range of building options regarded as the most suitable/likely for each site, taking into account the various site factors. This work was undertaken by PricewaterhouseCoopers.

The site evaluation process was the subject of oversight by the Busselton Hospital Site Selection Technical Working Group (BHSSTWG).

3.2 Technical Evaluation of Site Options (SKM)

Each site was assessed with regard to several sub-criteria, based on criteria groups related to accessibility, demographics, site area, flooding/emergency access, infrastructure issues, ownership issues, potential for private sector involvement, consistency with local/state planning strategies and project deliverability.

(With regard to flooding, sites have been evaluated in terms of a 1 in 100 year flood event. The Department of Water has since requested that the hospital be designed with reference to a 1 in 500 year flood event - this would require further investigation whichever site were recommended as the preferred site.)

A number of sites were excluded from further consideration by the BHSSTWG as a consequence of the technical assessment undertaken by SKM. The major reasons for exclusion were based on demographic grounds (Sites E, F1, F2 and G), available site area (E) and land ownership (D - due to unwillingness on the part of the owner/s to sell the land for the purpose of building a hospital).

Site options A1, A2, B and C performed sufficiently well in the technical evaluation for them to be short-listed for ongoing consideration. These sites were subjected to detailed financial evaluation including costing of a range of building options, taking into account the special factors affecting each site. This work was undertaken by PricewaterhouseCoopers (PwC).

The site factors identified by SKM and considered by the BHSSTWG to be sufficiently positive to support the inclusion of Sites A1, A2, B and C in the detailed financial analysis are listed in *Table 3* together with the more notable disadvantages associated with the sites (for details refer to SKM's report.

Table 3: Key Site Factors.
(Summarised from SKM's technical evaluation of site options report.)

Site	Advantages	Significant Disadvantages
A1	<ul style="list-style-type: none"> - no zoning/planning issues - good road access - reasonable siting for future population - reasonable emergency access - reasonable infrastructure access - reasonable project delivery time - potential synergies with private sector - good visibility from major roads - no flora or fauna issues 	<ul style="list-style-type: none"> - Very limited space available for services or future expansions - Poor public transport access - significant flood potential - Potential indigenous cultural heritage issues - Potential for mosquito proliferation
A2	<ul style="list-style-type: none"> - Adequate space for car parking - reasonable siting for future population - reasonable emergency access - reasonable project delivery time - potential synergies with private sector - good visibility from major roads 	<ul style="list-style-type: none"> - Significant zoning/planning issues - Limited expansion space available - Poor public transport access - Significant flood potential - potential indigenous cultural heritage issues - Potential road access issues re need to dual an existing highway - Pedestrian access issues - Potential for mosquito proliferation - Potential native title issues - Potential issues relating to threatened species
B	<ul style="list-style-type: none"> - no zoning/planning issues - adequate space for car parking and expansion - reasonable road access - more potential for public transport provision - reasonable population access - well located for total population and population over > 65 yr age group - existing infrastructure provisions - reasonable project delivery time - good patient environment 	<ul style="list-style-type: none"> - Limited flooding/emergency access - Potential issues relating to threatened species - Significant flood/storm surge potential - Site contamination issues

C	<ul style="list-style-type: none"> - adequate space for car parking and expansion - reasonable population access - good road access - reasonable infrastructure access - low flood risk - good visibility from major roads - reasonable project delivery time - more potential for future public transport provision 	<ul style="list-style-type: none"> - Significant zoning/planning issues - Limited flooding/emergency access - Site contamination issues
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As outlined in the table, each of the above potential sites has disadvantages which will require remediation/mitigation strategies to optimize development of a hospital facility.

It is noted that the sites were evaluated in terms of a 1 in 100 year flood event. The Department of Water (DoW) has since requested that the hospital be designed with reference to a 1 in 500 year flood event – this would require a detailed hydrological study addressing as a minimum:

- Determination of the 1 in 500 year rainfall event - this would need clarification of how the DoW define a 1 in 500 year event, particularly given the comparatively short period of data available for analysis;
- Determination of the flood routing and mapping (as part of appropriate hydrological modelling) for this rainfall event;
- Determination of the impact on Buayanyup drain and the likely drain breakout implications.

The proposed mitigation strategies as identified by SKM to address the more significant disadvantages for each of the four prospective sites are set out below:

Site A1 (Vasse)

Space Availability

The area available for the hospital and associated facilities is limited to 2.2 hectares. This area, whilst sufficient to allow an adequate multi storey development today, may well limit future expansion options should they be required. Without provision of additional site area, it is difficult to mitigate this situation.

Proximity to Population

The site is situated some distance from Busselton and Dunsborough which potentially increases dependence on private vehicles to access the hospital. Provision of a public transport service to link the Vasse region, including linkages between suburbs, with the areas of greater population density would help mitigate this situation.

Flooding

The site may be directly impacted by flooding. To mitigate against this event, the site level should be raised to avoid flooding, plus consideration given to providing drainage for breakout flow from Buayanyup drain.

Project deliverability

Indigenous cultural heritage issues may affect this site and impact the project. Project deliverability is an issue for all sites and advantage must be taken during the design/documentation phase (approx 18 months) to obtain all necessary approvals.

Site A2 (Vasse)

Space Availability

The area available for the hospital and associated facilities is limited to 4 hectares and may be affected by boundary or other setbacks. This area, whilst sufficient to

allow a single storey development today, may well limit future expansion options should they be required.

Proximity to Population

The site is situated some distance from Busselton and Dunsborough which potentially increases the dependence on private vehicles to access the hospital. Provision of a public transport service to link the Vasse region with the areas of greater population density would help mitigate this situation.

Project deliverability

Planning/zoning issues may prove time consuming for this site. At present, there is a level of uncertainty associated with the potential re-zoning issues associated with this site. The aged care operator has provided assurances that the aged residential facility will be co-located with the new public hospital regardless of the location for any associated retirement/self care facilities. This site may also be home to western ring-tailed possum populations. If this is identified, the proposal is likely to require submission to the Commonwealth for environmental assessment. Project deliverability is a significant issue for all sites and advantage must be taken during the design/documentation phase (approx 18 months) to obtain all necessary approvals.

Flooding

The site may be directly impacted by flooding. To mitigate against this, the site level should be raised to avoid flooding, and consideration should be given to providing drainage for breakout flow from Buayanyup drain.

Site B (Existing Hospital)

Flooding/Emergency Access

Site B may be impacted by reduced accessibility during flood events should access along Queen Elizabeth Avenue be cut off. Consideration needs to be given to providing access across the Busselton floodway via raised roadways.

Flooding/Storm Surges

The site may be directly impacted by flooding. The site level should be raised to avoid flooding.

Project Deliverability

Issues affecting project deliverability relate to environmental aspects, particularly protection of the Western Ring-tailed Possum habitat. The proposal will almost certainly require submission to the Commonwealth for environmental assessment. Architectural solutions to minimize the footprint of the preferred building option will assist in mitigation of the problem. Advantage should be taken during the design/documentation phase (approx 18 months) to obtain all necessary approvals

Site C (Former Abattoir)

Flooding/Emergency Access

Site C may be impacted by reduced accessibility during flood events should access along Queen Elizabeth Avenue be cut off. Consideration should be given to providing access across the Busselton floodway via raised roadways.

Project Deliverability

There is some uncertainty regarding planning/re-zoning issues associated with this site. A clear understanding from the Shire of Busselton that this site will receive rezoning support to allow a co-located public hospital and private residential aged care facility is essential before its acceptance as a viable site. The issues affecting project deliverability relates to re-zoning which would take at least nine to twelve months to resolve. Advantage should be taken during the design/documentation phase (approx 18 months) to obtain all necessary approvals

Where possible, site mitigation costs are included in the capital costs for each of the building options that are identified later in this summary report. Where this has not been possible they have been the subject of a quantified risk assessment undertaken by PriceWaterhouseCoopers(PwC).

In summary, Site B is ranked higher by SKM (refer Section 11.7 of the report) than any of the other sites in most criteria groupings (4 out of 6 groupings) followed by Site A1 (2 out of 6) and Site A2 (equal with Site A1 in 1 out of the 6 groupings).

3.3 Community Consultation (Estill and Associates)

A public consultation process was undertaken by Estill and Associates to allow the community an opportunity to provide feedback on the proposed replacement of the Hospital and Health Centre utilising either the existing hospital site or a new site located in Vasse. This consultation did not address Site Options C, D, E, F1, F2 and G.

The community consultation process involved a desktop study, public presentations at which submission forms were issued to attendees, stakeholder interviews and focus group discussions.

3.3.1 Public Submissions

A total of 978 submissions were received from people involved in the public consultation. 73.3% (656) of these supported redevelopment of BDH on the existing site.

Reasons offered for wanting redevelopment on the existing site and/or not wanting the hospital to be developed at Vasse Newtown were summarised as:

- Scope for expansion on the current site/lack of scope at Vasse Newtown
- Proximity of the current site to future population growth
- Loss of the environment afforded by the existing site
- Proximity to local facilities (e.g. St Johns Ambulance Centre, TAFE, schools)
- Additional traveling time for patients / staff / volunteers to Vasse Newtown
- Cost of land acquisition at Vasse Newtown
- Flooding risks at Vasse Newtown
- Additional travel for people living in East Busselton, Geographe, Port Geographe and Capel.

Reasons offered for wanting development at Vasse Newtown and/or not wanting the redevelopment on the existing site were summarised as:

- Proximity of Vasse Newton to Dunsborough, Margaret River, surrounding areas and future population growth
- Good access from Busselton by-pass
- Poor access to existing site
- Existing site could be better used for other purposes
- Regional benefits in Vasse Newton site.

3.3.2 Stakeholder Interviews and Focus Groups

The primary concern for most stakeholders was to achieve the best health outcomes for the community and the region. Medical staff, special interest groups and the community requested the adoption of a demonstrated health care model that will achieve improved health outcomes.

Other majority views/concerns expressed by participants included:

General

A willingness to make several "trade-offs" including travelling extra distances and losing the beachside location in order to obtain a facility that was new, improved and offered a larger range of services. The community was unwilling to accept relocation

of the hospital and the potential loss of the existing site if it was not going to obtain a new and improved facility that demonstrated improved health outcomes for the community and the region.

The proposed facility and site selection needs to demonstrate:

- An improved facility with additional services;
- A health care model that is based on best practice and has a demonstrated rationale;
- A regionally compatible and complimentary facility; and
- Positive site characteristics including accessibility, centrality, local and environment.

The ownership, size and future of the current hospital and health centre land.

Facilities and Services

Facilities and services need to be upgraded. (In this regard additional facilities and a wider range of services were identified including an intensive care unit, mental health services and improved oncology services.)

The community built and run hospice could not be recreated at an alternative site and that relocation of this facility would result in a loss of a community owned facility, detracting from the identity of the area.

Health Care Outcomes

The health care model selected needs to deliver optimum health care to the community, efficiently and cost effectively.

Acceptance of co-location with a private facility - co-location was expected to result in better health outcomes because:

- facilities and services are shared
- resources are maximised
- costs and resources are shared
- specialists are attracted to work within these environments
- additional services are offered.

Regional Context and Integration

The potential impact of staffing needs for the new Hospital and Health Centre on existing hospitals in the area including Bunbury and Margaret River required consideration. Staff being withdrawn from these facilities to work at the new Busselton Hospital should be avoided.

The new facility should be considered within the regional context. The facilities and services provided should be complimentary to the other health services in the region. There should be a clear rationalisation of all health facilities in the South West Region and a justification of where and why the new hospital fits in with and compliments the health needs of the region.

Site Characteristics

Traffic and access to the main roads is a critical consideration. It is important that the hospital is easily accessible and that there is no major traffic issues.

A new site must take into consideration proximity to population centres, the airport (for the flying doctors) and proximity to ambulances.

Easy access to the hospital must be provided on the existing site or an alternative site with easier entry and a “drive-in/drive-out” facility.

A concern that, if the hospital is to be relocated, there will be additional travel time and distance to the new facility and Busselton doctors will therefore not visit their patients in hospital because the additional travel time and distance will adversely impact on them financially.

Volunteers and staff may be lost if the hospital is moved beyond walking distance or a short driving distance.

If the hospital is relocated, it should be no more than five minutes away and central to Busselton and the projected population growth areas.

Local Environment

The natural and beachside location of the current hospital is perceived to be therapeutic and relaxing for patients and visitors.

If there are no health benefits for relocating the hospital, the community believe that the current site is too precious and significant to lose.

There are concerns that the Vasse site is a swamp that is prone to flooding. The community urge that likelihood for flooding on any proposed site is investigated thoroughly.

Land Ownership, Size and Future

It is critical that the land selected for the new hospital and Health Centre has appropriate room for expansion in order to meet future demands including parking.

The current hospital site was gifted to the community by the Lilly family and should remain in the community's possession. Most people are of the view that the proposed upgrade to the hospital can occur on the current site.

If the hospital is to be relocated a clear justification needs to be provided, and the remaining land should be used for health or public purposes.

Other Issues Raised

The decision about the site of the hospital has already been made and that the community consultation outcome will have little or no influence.

The community consultation, technical and financial reports should be public documents.

A small group of respondents believed that protecting the possums on the current site was important.

3.4 Financial Evaluation (PricewaterhouseCoopers)

3.4.1 Terms of Reference

The Terms of Reference for the Financial Evaluation were to prepare an evaluation of:

- The cost of developing the new hospital facilities at the respective sites, including site acquisition costs;
- The cost of operating the facilities on the respective sites;
- Any cost benefits from realisation of the existing site; and
- The cost differentials between the sites in respect of capital, recurrent and site acquisition costs
- Possible involvement of the private sector in the total project and in development of the public hospital facilities.

3.4.2 Potential for Private Hospital Operator Involvement (Australian Health Services Group)

This aspect has been addressed first as it is a critical determinant of the extent to which public sector investment will be necessary to provide the required services to the community of the Busselton Shire.

In its analysis AHSG identified the total inpatient and “day only” bed needs to be 88 beds in 2016. Of these, only 13 beds were assessed to be generated by private patient demand. AHSG has advised that the bed base required for a viable private hospital is a minimum of 60.

This view is supported by the fact that no real interest has been shown in a private hospital development by the key private hospital operators. The most likely private sector involvement would be in the provision of a medical centre with consulting rooms for specialists and diagnostic services, and for residential aged care services (the latter which has been pursued actively by one private sector aged care provider).

However, in the longer term, participation of the private sector in providing acute hospital services cannot be ruled out. In the meantime it is expected that inpatients electing to be treated in a private hospital would, in the main, have their procedures undertaken in St. John of God, Bunbury or in Perth private facilities, as occurs at the moment.

For aged care services, the situation is quite different. A proposal has been received from a private operator (St. Ives Group) with an approved license to provide 95 residential aged care beds in the Busselton area. This operator has indicated that, to date, the only acceptable site for this service is Vasse, desirably co-located with the public hospital. The possibility of other providers receiving residential aged care bed license approval for the Busselton area and being prepared to operate on any of the other potential hospital sites has not been explored.

The St. Ives Group also has offered to build 20 intermediate care beds at no cost to W.A. Health which could be used “by State Health” as flexible care beds and, in effect, add to the public hospital base. An assessment of this element of the offer has been undertaken by AHSG and this has demonstrated that the 20 intermediate care beds could reduce the need for public hospital beds by 10, to 65 beds.

3.4.3 Building Options

As a consequence of the above factors, building options covering the provision of both 65 and 75 public beds on the Vasse site have been included in the capital and operating cost analyses. The full range of building options for the four short-listed sites identified are:

Vasse Newtown (Site A1) - 4 multi-storied options identified as:

Option A1 - 1 - 75 bed new build without kitchen/laundry (these facilities/services to be provided by the co-located aged care operator)

Option A1 - 2 - 75 bed new build with kitchen/laundry

Option A1 - 3 - 65 bed new build with kitchen/laundry (with aged care operator providing 20 intermediate care beds)

Option A1 - 4 - 65 bed new build without kitchen/laundry.

Vasse Newtown (Site A2) - 4 single level options identified as:

Option A2 - 1 - 75 bed new build without kitchen/laundry

Option A2 - 2 - 75 bed new build with kitchen/laundry

Option A2 - 3 - 65 bed new build with kitchen/laundry

Option A2 - 4 - 65 bed new build without kitchen/laundry.

Existing Hospital site (Site B) - 3 development options identified as:

Option B - 1 - refurbish/expand existing as 75 bed single level hospital

Option B - 2 - 75 bed new build as a single level hospital

Option B - 3 - 75 bed new build as a multi-storied structure.

Former Abattoir site (Site C)

Option C - 75 bed new build solution as a single level facility with kitchen and laundry.

3.4.4 Risk Assessment and Quantification of Site/Building Options

Each of the site and building options has been reviewed by PwC in order to quantify the magnitude of risks inherent for each option.

Key capital cost risks identified relate to planning /environmental approvals, future proofing, underestimation of future development requirements (a qualitative risk), capital input costs changing materially, the possibility that community expectations may not match project design, potential for flooding and tidal surges, latent ground conditions, latent defects, time delays, decanting and staging.

Operational risks also exist and, in particular, relate to ongoing operations such as interaction with the private sector, maintenance costs and potential transport costs.

A risk quantification methodology has been applied to each site/building option to determine for the impact associated with the level of probability for capital and operating related risks identified for each option occurring, in combination with the likely cost impact of such occurrence.

The risk results for each site and linked building option are outlined in Table 4 and represent the additional cost for each option after the application of a Net Present Cost (NPC) adjustment (refer Sections 4.5.1 and 4.7 of the attached PricewaterhouseCoopers Report).

Table 4: Quantified Capital and Recurrent Risks

<i>Build Option</i>	<i>Raw Capital Risk Adjustment (NPC \$m)</i>	<i>Raw Recurrent Risk Adjustment (NPC \$m)</i>	<i>Total Raw Risk Adjustment (NPC \$m)</i>	<i>Total Raw Risk Adjustment as a % of Total Capital NPC Costs</i>
Option A1-1	3.5	7.1	10.6	20.3%
Option A1-2	3.5	6.8	10.3	19.2%
Option A1-3	3.5	7.1	10.6	25.5%
Option A1-4	3.5	7.1	10.6	26.4%
Option A2-1	3.7	7.1	10.8	21.0%
Option A2-2	3.7	6.8	10.5	20.0%
Option A2-3	3.7	7.1	10.8	26.6%
Option A2-4	3.7	7.1	10.8	27.4%
Option B1	4.9	2.7	7.6	15.2%
Option B2	4.7	2.4	7.1	13.6%
Option B3	4.2	2.4	6.6	12.1%
Option C	3.9	5.6	9.5	19.0%

The above total raw risk adjustment figures are used later to determine the total risk adjusted costs for each site/building option.

3.4.5 Capital Costs

Capital costs for each of the building options have been determined and include site acquisition costs, allowances for external works and contingencies, plus provision for escalation (utilising building cost escalation data published by the Department of Housing and Works). A Net Present Cost (NPC) methodology was then applied.

Table 5 lists the nominal and net present capital costs of each site/building option.

It should be noted that the capital costs are preliminary estimates that allow comparisons to be made between site and building options and have been prepared without the benefit of all the information normally available for costing purposes.

Table 5: Nominal and Net Present Capital Costs.

<i>Build Option</i>	<i>Site Acquisition Cost (nominal \$m)</i>	<i>Total Capital Build Cost including site acquisition costs (nominal \$m)</i>	<i>Site Acquisition Cost (NPC \$m)</i>	<i>Total Capital Build Cost including site acquisition costs (NPC \$m)</i>
Option A1-1	18	79.7	16.6	68.4
Option A1-2	18	81.3	16.6	69.7
Option A1-3	18	78.5	16.6	67.4
Option A1-4	18	76.8	16.6	66.0
Option A2-1	0.0	61.0	0.0	51.4
Option A2-2	0.0	62.5	0.0	52.6
Option A2-3	0.0	59.8	0.0	50.4
Option A2-4	0.0	58.3	0.0	49.2
Option B1	0.0	58.4	0.0	49.3
Option B2	0.0	61.7	0.0	52.1
Option B3	0.0	64.1	0.0	53.9
Option C	30	89.4	27.6	77.7

The best performing building options utilising both nominal and NPC adjusted capital costs are all linked to either Site A2 or Site B, largely because there are no acquisition costs applicable to these two sites.

No adjustment to capital costs has been made to allow for the realisation value of the existing site. There are many risks involved with the sale of this site and, accordingly, it can only be noted that the site is worth up to \$27m depending on zoning, environmental issues and the Government's ability or otherwise to realise its sale.

3.4.5 Operating Cost Differentials

As previously indicated, for the 4 sites under consideration there are a total of 12 building options available. Building Options A2-2, B-2 and C are considered by AHSB to be “standard” public hospital operating models and are considered as such for comparison purposes. These options see the public hospital developed and operated as a fully self-contained service, with support services provided “in house”.

Options A1-1, A1-2, A1-3, A1-4, A2-1, A2-3, A2-4, B-1 and B-3 all have operational variations to this standard model. The operating cost differentials for each of these 9 options has been reviewed by AHSB and appear as Appendix F in the attached report prepared by PwC.

While there are operational cost variations between these building options, the variations for building options A1-3, A1-4, A2-3 and A2-4 are the only ones of any real significance (varying between \$9.3m and \$9.8m on an NPV basis, depending on the option chosen).

The operating cost benefits projected for the Vasse sites are achieved by co-location with a private aged care facility. It should be noted that these figures are indicative only and are still to be confirmed in tenders/negotiations with potential operators.

The impact of operational cost variations for all of the non-standard building options are included in the Net Present Value adjustments applied by PwC to determine the total NPV adjusted costs for each site/building option over the 25 year life cycle of the project.

3.4.6 Total Net Present Cost of Building Options

The final net present cost of the twelve site/building options was determined by summing the NPC adjusted site acquisition costs, capital costs, operating cost differentials, capital and operating risk adjustments.

The outcome is summarised in Table 6 and indicates that Options A2 -4, A2 -3, B -1 and B -2 are the superior financial options.

The two well performed Site A -2 building options achieve this position as they involve construction of 10 fewer public beds, with consequent reduced capital cost and significant operating cost reductions over the 25 year life cycle of the project. This outcome is achieved as a consequence of the proposed co-location of residential aged care facilities and the possibility of purchasing sub-acute care services at a reduced cost.

The possibility of the other sites attracting private sector interest for the provision of co-located residential aged care services has not been tested as yet. A similar benefit may also be possible for these sites.

Table 6: Total Final Net Present Cost of All Site/Building Options

<i>Build Option</i>	<i>Site Acquisition cost (\$m NPC)</i>	<i>Capital Build Cost including Site Acquisition (\$m NPC)</i>	<i>Operating Cost Differentials(\$m NPC)</i>	<i>Total Costs(\$m NPC)</i>	<i>Risk Adjustment (\$m NPC)</i>	<i>Risk Adjusted Costs (excluding Site Realisation Funds, \$m NPC)</i>
Option A1-1	16.6	68.4	0.5	68.9	10.6	79.5
Option A1-2	16.6	69.7	0.5	70.2	10.3	80.5

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Option A1-3	16.6	67.4	(9.3)	58.1	10.6	68.7
Option A1-4	16.6	66.0	(9.3)	56.7	10.6	67.3
Option A2-1	0.0	51.4	0.0	51.4	10.8	62.2
Option A2-2	0.0	52.6	0.0	52.6	10.5	63.1
Option A2-3	0.0	50.4	(9.8)	40.6	10.8	51.4
Option A2-4	0.0	49.2	(9.8)	39.4	10.8	50.2
Option B1	0.0	49.3	0.7	50.0	7.6	57.6
Option B2	0.0	52.1	0.0	52.1	7.1	59.2
Option B3	0.0	53.9	0.5	54.4	6.6	61.0
Option C	27.6	77.7	0.0	77.7	9.5	87.2

3.4.7 Summary of Outcomes

Detailed technical and financial evaluation of the identified sites indicates that the superior site/building options utilising NPC adjusted costs (incorporating all identified costs including capital and operating risk adjustments) are ranked as:

1. \$50.2m for Option A2 - 4 (Vasse) - single level, with 65 public beds, no kitchen/laundry and the purchase of non-acute services from a co-located private sector residential aged care operator (10 bed equivalent)
2. \$51.4m for Option A2 - 3 (Vasse) - single level, with 65 public beds, kitchen and laundry and the purchase of non acute services from a co-located private sector residential aged care operator
3. \$57.6m for Option B - 1 (Existing Busselton Site) - part refurb/part new, with 75 public beds, kitchen and laundry and with all services provided "in-house"
4. \$59.2m for Option B - 2 (Existing Busselton Site) - all new, single level, with 75 beds, kitchen and laundry and with all services provided "in-house".

As noted above the Vasse Newton sites benefit significantly from the assumed impact of co-location with the aged care facility. The possibility of a similar model being applied to other sites has not been investigated. However the Vasse licensee has indicated an unwillingness to consider other sites.