

**The States of Jersey
Hospital Pre-Feasibility
Spatial Assessment Project**

**Jersey General Hospital: Refined Concept
Addendum to the Strategic Outline Case**

3rd October 2013

Notice

This document and its contents have been prepared and are intended solely for States of Jersey's information and use in relation to Pre-feasibility Spatial Assessment.

WS Atkins International Limited assumes no responsibility to any other party in respect of or arising out of or in connection with this document and/or its contents.

This document has 50 pages including the cover.

Document history

Job number: 5113836			Document ref: Strategic Outline Case			
Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
01	Draft	IAS / AV	DB	IST	SD	03.09.13
02	Issue	IAS / AV	DB	IST	SD	25.09.13
03	Issue	IAS / AV	DB	IST	SD	03.10.13

Client sign-off

Client	States of Jersey
Project	Pre-feasibility Spatial Assessment project: Jersey General Hospital
Document title	Refined Concept : Strategic Outline Case
Job no.	5113836
Copy no.	
Document reference	5113836.R4-010

Name:

Position:

Date:

Contents

NOTICE	2
Document history	2
Client sign-off.....	2
1. INTRODUCTION.....	6
1.1. Purpose.....	6
1.2. Methodology	7
2. STRATEGIC CASE	9
2.1. The strategic context.....	9
2.1.1. Reasons for change	9
2.1.2. Strategic vision	9
2.2. The case for change.....	10
2.2.1. The existing situation	10
2.2.2. Identifying the business need	11
2.2.3. Demographic changes	11
2.2.4. In-patient care pathways.....	12
2.2.5. Analysis.....	13
2.2.6. Initial departmental schedule of accommodation	14
3. ECONOMIC CASE: ASSESSMENT PROCESS	15
3.1. Revised States of Jersey development brief	15
3.2. Refined concept.....	15
3.2.1. Redevelopment strategies	15
3.2.2. Building strategy.....	16
3.2.3. Clinical strategy	17
3.2.4. Site development proposals: General Hospital.....	18

3.2.5.	Site development proposals: Overdale Hospital	19
3.2.6.	Design considerations	20
3.2.7.	Risks	22
4.	COMMERCIAL CASE.....	26
4.1.	Procurement strategy and options	26
4.1.1.	Introduction.....	26
4.1.2.	Traditional	26
4.1.3.	Construction Management	27
4.1.4.	Design and Build – single stage or two stage	28
4.1.5.	Single stage Design and Build	28
4.1.6.	Two stage Design and Build.....	28
4.2.	Site and phasing proposals.....	29
4.2.1.	Jersey General Hospital	30
4.3.	Criteria for selection of procurement route.....	31
4.4.	Potential for risk transfer and risk management strategy	34
5.	FINANCIAL CASE	36
5.1.	Funding strategy.....	36
5.2.	Assessment of revenue costs	37
5.3.	Ten-year programme of maintenance costs	38
5.4.	Assessment of capital costs.....	39
5.5.	Affordability.....	40
5.6.	Appraisal and Evaluation	41

6.	MANAGEMENT CASE	44
6.1.	Project management arrangements	44
6.2.	Timescales for the development	44
6.3.	Support for the project.....	45
7.	SUMMARY	46
7.1.	The need for change.....	46
7.2.	Conclusion of this Strategic Outline Case.....	46

1. Introduction

1.1. Purpose

01. The need to review the provision of its General and Acute Hospital is a strategic priority for the States of Jersey and a key objective for the Health and Social Services Department, for the following reasons:
 - the KPMG Report 'A proposed new system for Health and Social Services' (2011) makes it clear that the current hospital is no longer fit for purpose and replacement will be required by 2020;
 - there are already pressing needs with occupancy exceeding advisory levels and restricted contingency capacity;
 - the general arrangement of buildings at the Hospital is problematic and the age and condition of key buildings means that best practice standards in many areas cannot be implemented; and
 - the overall condition of the Hospital is deteriorating rapidly.
02. The Pre-feasibility Spatial Assessment Project study and Strategic Outline Case was undertaken for the States of Jersey by WS Atkins International Limited between June 2012 and May 2013.
03. The outcome of the assessment was then considered by the Ministerial Oversight charged with overseeing health transformation to identify a preferred location for new hospital development. The outcome of this consideration was that a phased redevelopment and expansion of the existing Jersey General Hospital in St. Helier was the preferred solution.
04. In parallel with the pre-feasibility spatial assessment, a review of funding options and affordability was undertaken by the States. This resulted in the identification of an affordability envelope for development of the existing General Hospital, together with a recommended funding strategy to pay for it.
05. The Pre-Feasibility study outcome and the proposed funding strategy were considered by the Ministerial Oversight Group on 18th June 2013. Ministers requested that a refined proposal, based on the findings and recommendation of the previous Pre-Feasibility Strategic Outline Case, but within the identified funding available, be drawn up, to inform the States Assembly of the approach to be adopted within a more detailed Feasibility Study.
06. The tasks identified by The States of Jersey for this refined concept and addendum to the Pre-Feasibility Strategic Outline Business Case comprised:
 - the development of a refined hospital concept by a Health Design Champion appointed separately and directly by The States of Jersey;
 - a review of the proposed refined concept by WS Atkins highlighting concerns, risks and opportunities arising from the concept;

- the development of a cost estimate for the refined concept in the standard format required by the United Kingdom National Health Service Estates good practice and cost guidelines as adjusted for local circumstances, identifying the departmental costs, on costs, non-works costs and equipment costs of the proposal;
 - The cost estimate to include a 10 year programme of building and building services' maintenance costs for the refined concept, contained within an allocated Health infrastructure budget for this purpose, identifying the priority investment required in refurbished and new build departments to ensure the entire hospital capacity remains fit for purpose throughout, whilst having full regard to value for money, condition, demand and safety;
 - the recommendation of the final refined concept solution within a supporting business case and funding submission.
07. This addendum to the Pre-Feasibility Strategic Outline Case identifies the resulting revised preferred option for consideration; explains the benefits and risks associated with each option; assesses the costs associated with the implementation of the preferred option and concludes with a recommended way forward.

1.2. Methodology

08. This document follows the best practice standards and format for business cases, as recommended by the UK's HM Treasury, the Welsh Assembly and Health Facilities Scotland and as adopted in the production of the previous Pre-Feasibility Strategic Outline Case.
09. The approved format for the development of this Strategic Outline Case (and subsequently through outline business case and then full business case), is the Five Case Model, which comprises the following key components:
- The **strategic case** section - sets out the strategic context and the case for change, together with the supporting investment objectives for the scheme;
 - The **economic case** section - demonstrates that the organisation has selected a preferred way forward, which best meets the existing and future needs of the service and is likely to optimise value for money;
 - The **commercial case** section - outlines the process at this stage for ensuring that any potential deal to redevelop the hospital will be subject to clear and robust procedures for establishing best value;
 - The **financial case** section - highlights likely funding and affordability issues and the potential balance sheet treatment of the scheme;
 - The **management case** section - demonstrates that the scheme is achievable and can be delivered successfully in accordance with accepted best practice.
10. The previous Strategic Outline Case described in detail, the site options studied, consultations and assessments undertaken and the evaluation process followed during the

Hospital Pre Feasibility Spatial Assessment Project

Jersey General Hospital Refined Concept:

Addendum Strategic Outline Case: v.03

3rd October 2013



pre-feasibility spatial study in determining a preferred site recommendation; reference can be made to that document and its associated appendices as this information is not repeated in this document.

2. Strategic case

2.1. The strategic context

2.1.1. Reasons for change

11. The Pre-Feasibility Strategic Outline Case explained that development of new acute hospital facilities is central to a wide range of initiatives which have been identified to meet the challenges facing the Island's Health and Social Services. P.82/2012 makes it clear that a new or re-developed hospital will be required within 10 years, one that is fit for purpose, capable of sustaining the general and acute care requirements for the population and one that is aligned with the proposed new system of health and social care on the Island.
12. The reason for change and why anew or re-developed hospital is required is that it is inappropriate to continue to provide clinical services in the existing facility which does not meet current building, operational or efficiency standards nor caters for current and projected future clinical demands. In particular, the following aspects are cause for concern:
 - The existing provision of functional types, sizes and relationships of rooms and their associated communication flows do not meet current healthcare design guidance, space standards and current best working practices;
 - The existing provision of the numbers of beds available and the provision of single bedroom accommodation do not meet current emergency demand, nor projected future daily demands whilst operating at recognised best practice occupancy rates.
13. A new or re-developed hospital will respond to a number of pressing issues which fall into two key groups:
 - Responding to the strategic imperatives of developing an integrated care service on the island where the acute and community based health services are designed to complement and support an integrated strategy; and
 - 2 - Responding to the very obvious physical requirements for a new or redeveloped hospital to address the headline issues with the current hospital as detailed in the States of Jersey Pre-Feasibility Spatial assessment Project Strategic Outline Case.

2.1.2. Strategic vision

14. The Green Paper, "Caring for Each other, Caring for Ourselves (May 2011)", clearly identified the three guiding principles which were identified by stakeholders in Jersey through consultation:
 - 'Safe' - While many health interventions involve inherent levels of risk, that patients and service users should not be exposed to an undue level of risk;

- 'Sustainable' - that services should be organised in a way that is not vulnerable to change in the short term;
 - 'Affordable' - that the model of services represents value for money relative to other potential models.
15. P.82/2012 "Health and Social Services: A New Way Forward" clearly summarises the clinical vision for acute care and identifies how the new acute hospital will fit with the delivery of acute, community and primary care services on the island as well as integration with care delivered off island.
16. The vision and associated development principles were developed and distilled in the context of the pre-feasibility study, into a set of investment objectives, against which a set of benefits criteria were used to assess the potential site options. The conclusion of the pre-feasibility study confirmed that the redevelopment of the existing general hospital site in St Helier was the most appropriate solution when benefit, risk and cost factors were all considered.

2.2. The case for change

2.2.1. The existing situation

17. Jersey General Hospital, situated in St. Helier, operates as the only acute hospital facility on the island. (Other hospitals at Overdale provide a combination of rehabilitation and social services and at Saint Saviours provide mental health services.) The population of Jersey at the end of 2011 was approximately 98,000 (as per the latest 2011 Census information available in September 2012). The current acute hospital in St Helier therefore occupies a reasonably unique position in that it serves a population which is considerably smaller than a comparable general hospital would serve in the United Kingdom.
18. The Pre-Feasibility Strategic Outline Case incorporated revised population projections for Jersey, based on the 2011 Census. The activity and capacity modelling, on which the refined hospital concept key functional content has been based, utilises actual healthcare activity information for 2011/12. This actual activity was projected forward using the latest updated population projections at September 2012. The Pre-Feasibility Strategic Outline Case capacity model reflects the revised population projections delivered by the States of Jersey Statistics Unit; the model is based on the revised inwards migration scenario titled +350 (assuming a net inwards yearly migration to the island of 350 people). Further sensitivities utilising other migration scenarios were also run (+700 migration and net nil inwards migration) to test the effect of different migration scenarios on overall bed numbers. The results of such sensitivities were not considered material in terms of overarching area requirements of new hospital facilities.

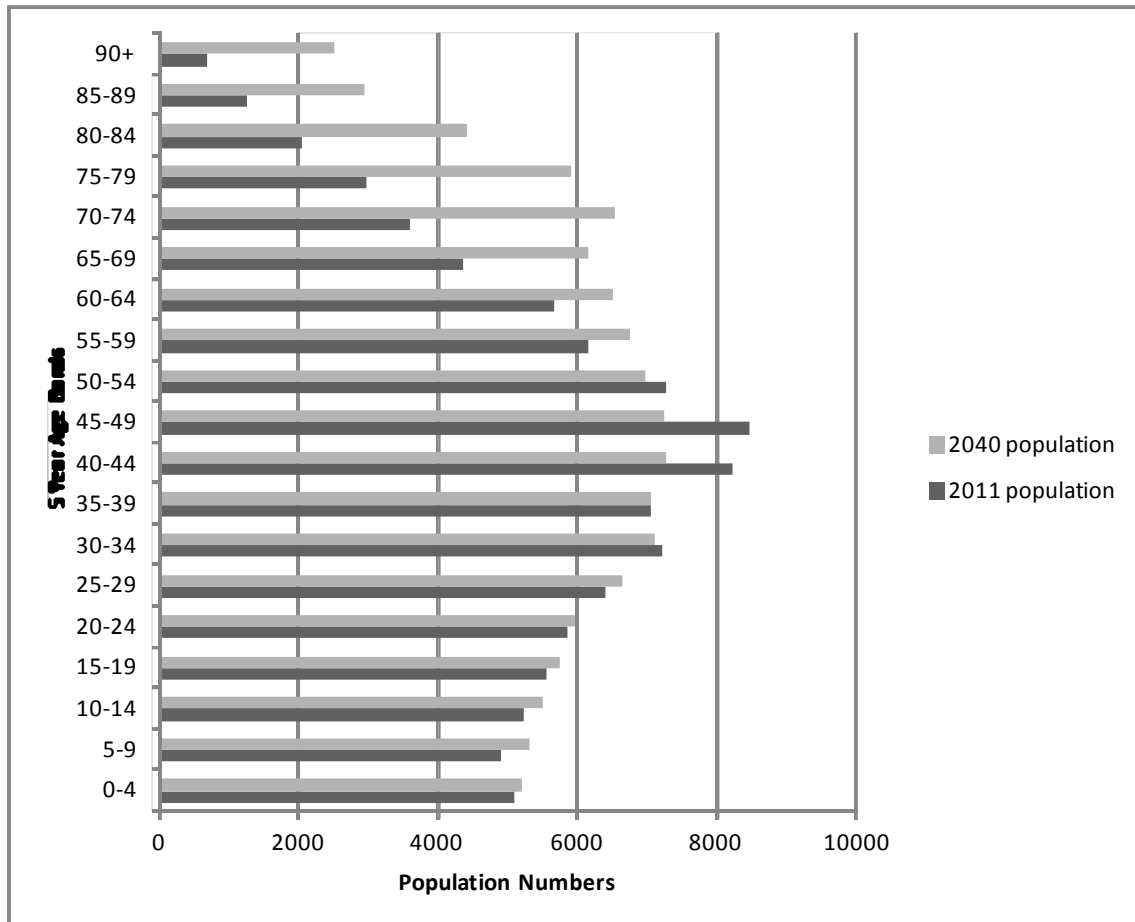
2.2.2. Identifying the business need

19. The overall condition of the Hospital is deteriorating rapidly. Reconfiguration of the current buildings will, in nearly all aspects, require significant refurbishment costs to address infrastructure issues whilst at the same time not addressing the inherent space, clinical flow and adjacency issues.
20. The following items represent the headline issues of concern with the current hospital:
 - Inefficient and aging design - poor clinical adjacencies;
 - Poor space standards - compromising effective care delivery;
 - Lack of flexibility;
 - Poor separation of clinical and non clinical flows;
 - Poor gender separation and lack of privacy;
 - Poor supporting mechanical and engineering infrastructure;
 - Poor fire compartmentalisation to allow progressive horizontal evacuation;
 - Escalating maintenance costs, as mechanical and electrical plant reaches the end of its useful life.
21. Complete redesign of the hospital is required to meet the current and future acute clinical needs of the population and such detailed master-planning and clinical reconfiguration will form an integral part of the future development of a new or redeveloped hospital in the detailed Feasibility Study phase of development.
22. A detailed strategic model was developed to support the Pre-Feasibility Strategic Outline Case which identifies the future key functional requirements based on an analysis of the current hospital activity including a forward projection for 30 years to 2040 (Appendix 1 of the Pre-Feasibility Strategic Outline Case refers).

2.2.3. Demographic changes

23. The following graph from the Pre-Feasibility Strategic Outline Case identifies pictorially the anticipated change in population numbers and proportions by age group from 2011 to 2040 based on the September 2012 population projection (+350 inwards migration). The key issue in terms of the impact on health need for the island rests in the very obvious increase in the elderly population.
24. The population between 75 and 89 more than doubles to 2040 and the population over 90 grows from 670 to 2,482 (a 370% increase). This has a significant effect on overall bed requirements when modelled as it is the older age categories of patients that consume the most hospital resources, particularly with regards to bed requirements.

Figure 2.1: Graph of population projections from 2011 to 2040



2.2.4. In-patient care pathways

25. The capacity model developed as part of the Pre-Feasibility Strategic Outline Case responds to the strategy contained within the States paper P.82/2012- " Health and Social Services: A New Way Forward", that for both elective and emergency activity, an increasing proportion of patients can and should be more appropriately cared for outside of an acute hospital ward. The appropriate community based environments into which they can be transferred are ones which focus on active rehabilitation and mobilisation either within a step up / step down environment or another domiciliary environment such as a care home or the patient's own home where care can be efficiently and effectively provided.
26. The Pre-Feasibility Strategic Outline Case confirmed that investment in associated community based resources and a detailed programme of work to ensure that community services can more appropriately replace the acute based care currently within the hospital, will be needed to achieve the envisaged real terms reduction in beds from c.400 to c.300 by 2040.

2.2.5. Analysis

27. The Pre-Feasibility Strategic Outline Case analysis of current activity based on 2011/12 data clearly demonstrates that there is considerable pressure on beds to cope with current demand. In addition the way the current bed stock is configured does not allow them to be used as flexibly as desired. Re-provision of beds in a more flexible manner (utilising a high number of single rooms) is an imperative to allow sufficient capacity to cope with future demand. Key issues incorporated into the current bed modelling includes:
- The use of single rooms and a shift towards 7 day-week operation for all elective beds;
 - Reducing lengths of stay by enhancing community and primary care based services;
 - Accounting for demographic changes through to 2040.
28. The Strategic Outline Case figure below summarises the future bed requirements, on which the sizing and costing of the future capital development has been based.

Figure 2.2 Table summarising future bed requirements for Jersey Hospital

	2010 beds (actual)	Modelled Bed requirements based on 2011/12 Activity	Modelled bed projections to 2040	
			Acute based care continues - status quo	Full achievement of community based care strategy
Zero Length Of Stay In Patient beds		11	17	
adult emergency	168	131	260	206
adult elective		46	62	28
Less admissions avoidance strategies				-7
	168	188	340	227
Paediatrics beds	15	17	13	13
Neonatal cots	8	9	9	9
Obstetrics beds	26	23	29	29
Private beds	28	13	18	18
Total In Patient Beds	245	250	409	296
Adult day case beds/trolleys		13	18	20
Paed day case beds/trolleys		2	2	2
Total day case beds/trolleys		15	20	22

The above bed calculations are based upon assumptions and outputs as set out within the Pre Feasibility Strategic Outline Case.

2.2.6. Initial departmental schedule of accommodation

29. The outputs from the above bed number modelling are used to produce the high level schedules of accommodation, based on overarching departmental functional areas, which have been produced as a result of this modelling process.
30. The current hospital is approximately 39,000 m² in area. The Pre-Feasibility Strategic Outline Case to define the future business need for the acute hospital indicates that a new hospital would require a significant increase in area just to meet current UK NHS hospital space standards. The total area of a completely new hospital based on the base NHS guidelines, assuming community and other strategies described in P.82/2012 are fully implemented, would be approximately 64,000 m².
31. A review of current international spatial standards undertaken by WS Atkins International Limited suggested that the NHS spatial requirements are often larger than those specified elsewhere. For example, specified standards for theatre and bedroom sizes in the United States and Australia are significantly smaller than those required by United Kingdom NHS guidance. While these may partly reflect different models of care employed in those countries, other evidence from facilities and procurements in the United Kingdom suggests that lower spatial standards are often necessary and prove clinically acceptable. As a result, and because the stated desire of the States of Jersey client is to achieve the most for the available funding, a target figure of a 15% reduction below the UK NHS spatial guidance has been adopted within the refined concept. This is accepted by the Health and Social Services as an acceptable planning assumption at Departmental level and would in any case be reviewed for service level clinical acceptability within the detailed feasibility stage.
32. The impact of not implementing community-based care strategies has a significant effect on the hospital size. If the community strategies approved within P.82/2012 were not to be introduced, the increase in the hospital area requirements for a new hospital would rise by approximately 9,000 m², based on UK standards, and incur an additional cost of approximately £60 million.

3. Economic case: assessment process

33. The purpose of the Economic Case is to assess site options against the investment objectives as defined through the benefit and risk criteria and, subsequently, assess the costs of short-listed options.
34. In chapter 3, the Economic case: assessment process, of the previous Pre-Feasibility Strategic Outline Case document, the evaluation process, benefits and risk criteria used in the evaluation of the various site options, the evaluation scoring process and outcomes with the final recommendation of the redevelopment of the existing General Hospital being the preferred site option, were all presented in some detail.
35. This addendum study was commissioned assuming the same basis of that previous analysis and evaluation, but with the new requirement of redeveloping the existing General Hospital facility to a revised funding requirement, an associated clinical prioritisation and revised timescale.

3.1. Revised States of Jersey development brief

36. The aim of this addendum study is to identify a refined concept proposal for new hospital capacity within a reduced, and sustainable, funding package.
37. To assist the States of Jersey Health and Social Services develop its prioritisation of acute services over the next 10 years, to develop a refined schedule of accommodation and to reach agreement on a refined concept design and phasing strategy, a Health Design Champion was appointed separately by the States of Jersey.
38. Availability of funding was the key driver in developing these revised proposals. The preferred site option developed in the previous pre-feasibility study identified a total new construction and land cost of approximately £462 million; the States of Jersey subsequently identified a maximum sustainable total capital funding package of £250 Million (excluding contingency) spread over 10 years coupled with a 10-year programme of investment for the priority maintenance of the existing hospital buildings.

3.2. Refined concept

3.2.1. Redevelopment strategies

39. The analytical work carried out during the previous pre-feasibility study had identified and confirmed that the redevelopment of the existing General Hospital site was the preferred location were a whole new hospital required.
40. A fundamental redevelopment strategy for any facility which has to remain operational whilst the redevelopment is carried out, whether it be, for instance, a hospital, school or large manufacturing facility, is to build wholly or partly new replacement or additional new buildings on vacant ground within the existing site or to create vacant sites for

development by demolishing redundant buildings. This provides new buildings into which existing facilities and services can be transferred, thus vacating space within the existing buildings which allows a subsequent rolling programme of redevelopment to take place.

41. The development strategy adopted to achieve the aims of providing an enlarged general hospital facility on the existing intensively developed town centre site entailed the demolition and replacement of inefficient and unsuitable buildings within the site and the purchase of adjacent properties along Kensington Place to provide the necessary, additional redevelopment expansion site area which was not available within the existing site boundaries. This added to the overall redevelopment costs.
42. In order to meet the challenge of providing the necessary current and future clinical services in replacement and expanded hospital facilities but within the identified reduced budget, an alternative development strategy had to be considered. This entailed reconsidering the use of the existing buildings on the general hospital site and seeking alternative site locations for the construction of new buildings to accommodate the demands of the current and future clinical services, but without incurring additional land and property purchase costs.

3.2.2. Building strategy

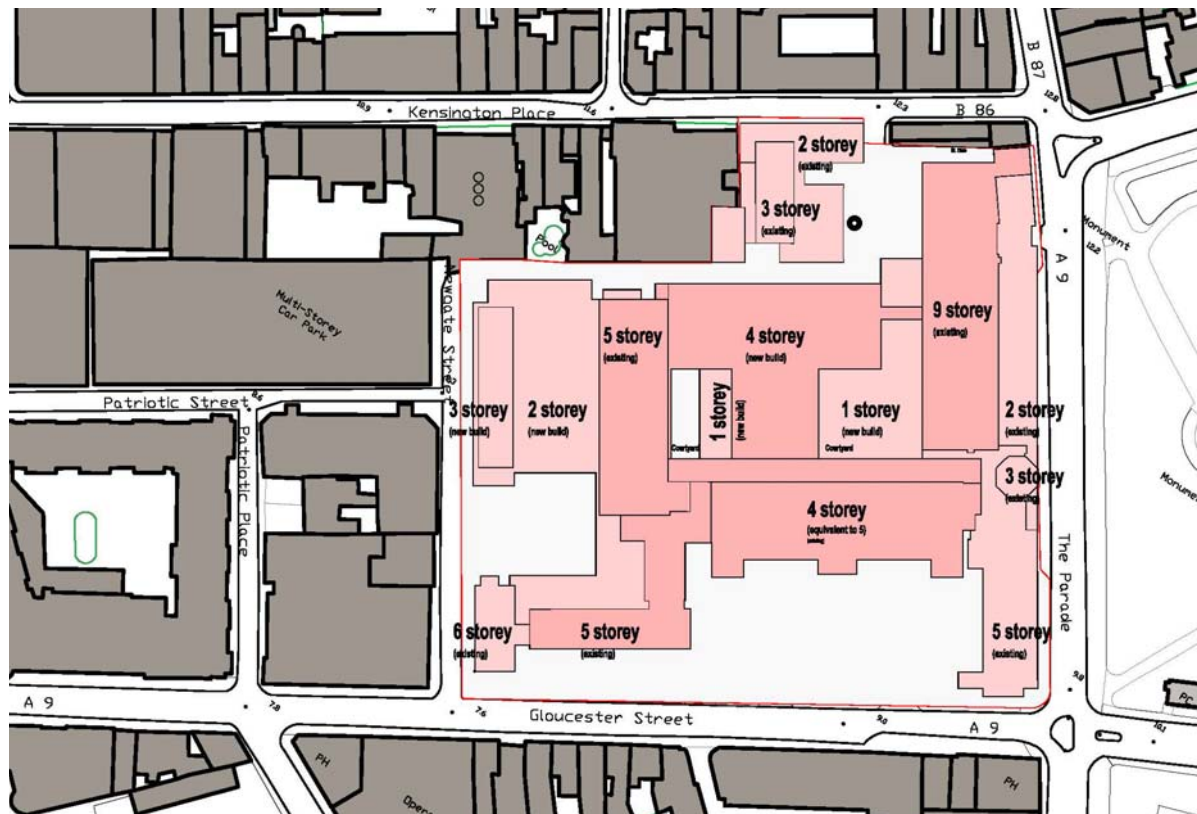
43. The proposed building solution to reduce costs is to re-use those existing buildings that can have continuing useful function as clinical or ancillary buildings; i.e. the 1980's ward block, the listed Granite Building, the Peter Crill House education and office block and the clinical Gwyneth Huelin Building. It is proposed to demolish the two-storey buildings adjacent to the Gwyneth Huelin Building and to replace these with new buildings of greater capacity to provide additional accommodation area within the general hospital. This will then maximise the potential development area of the existing hospital site without recourse to the purchase of adjacent properties.
44. On completion of the whole redevelopment, it is proposed that the existing 1960's Wing which, although currently extensively used, does not have the appropriate structure and infrastructure to meet effectively the demands of current and future clinical services, will as a result be vacated and be retained either for future temporary decanting or expansion needs, or become part of a subsequent development.
45. It is necessary to provide elsewhere additional new building accommodation, partly to meet the projected increased size of the overall hospital facility, but also to provide alternative relocation accommodation for those departments contained within the buildings which are proposed to be demolished prior to them being re-provided.
46. Consequently, and as part of a wider States of Jersey Health and Social Services estates strategy, it is proposed to redevelop and regenerate part of the Overdale Hospital site, replacing the current obsolete and redundant buildings with a new high quality ambulatory care out-patient hospital. This entails splitting the proposed clinical services between two separate sites. Such a proposal requires, at the pre-feasibility stage, the consideration of

a different model of care and significant consultation with the clinical and medical directors and senior nurses to ensure that the proposed model will operate safely and sustainably.

3.2.3. Clinical strategy

47. Consultations were held by the appointed Health Design Champion with members of the Project Team, the Clinical and Medical Directors and Senior Nurses. A number of alternatives were considered during consultation, for example separating acute and non-acute services. Subsequently, a clinical strategy separating the ambulatory care outpatient departments from the acute clinical departments was identified as potentially one that could significantly improve clinical benefits within the affordability envelope. A proposal was therefore taken forward that envisaged an ambulatory care centre be developed on the Overdale Hospital site along with a separate renal and diabetes centre, the main Pharmacy and Laboratories.
48. The separation of ambulatory care services from acute clinical services follows the principle adopted elsewhere in the UK where Ambulatory Care and Diagnostic Centres located on independent sites, support local acute District General Hospitals. This enables a clear and comprehensible separation of functions for both patients and staff, where separate hospitals are required without requiring significant duplication of services. The approach can also facilitate a closer integration between rehabilitation and community based social services in accordance with the approved strategy for health and social services transformation.
49. The proposal requires a fundamental reconfiguration of acute health services and therefore the existing Acute Service Strategy is being revisited to ensure that a coordinated approach to subsequent service development can be planned in accordance with the new model of care. Once the Acute Service Strategy is in place, an Acute Service Plan to implement the agreed strategy can be set out to establish the nature and process for necessary changes to each acute service and the resulting facility requirements.
50. The proposal has advantages because it is predominantly, but not exclusively, the ambulatory out-patient departments, and the Pharmacy and Laboratories which are currently located within the buildings on either side of the Gwyneth Huelin Building which are scheduled to be demolished. The construction of these new replacement facilities on the Overdale Hospital site will therefore form the first phase of the overall redevelopment programme, and allow the clearance of sufficient building space to enable subsequent redevelopment of these vacated sites within the General Hospital site.

3.2.4. Site development proposals: General Hospital



51. The refined concept proposal for the redeveloped General Hospital is contained within a smaller building envelope than previously identified in the pre-feasibility study and is contained within the maximum building heights previously identified by the States' planning officers.
52. The proposed redevelopment of the existing hospital facilities is undertaken through a combination of new-build replacement facilities, alteration and refurbishment of existing buildings and the retention without change of some existing facilities.
53. Although the size of some departments and the numbers of in-patient beds is increasing resulting in an increased number of members of staff, patients and visitors it is proposed that the car park provision on site remains as existing. With the relocation of the out-patient departments to Overdale Hospital, there will be a compensating reduction in numbers of staff and out-patients visiting the General Hospital and hence a reduction in the number of car parking spaces required.
54. The refined concept proposals include, in a mix of new-build and refurbished accommodation, the required clinical and support services, located as follows:
 - basement level: Medical records, plant and storage, car parking;

- ground floor level: Main entrance, dining & retail, staff changing, mortuary, imaging, education, day surgery and the emergency department;
- first floor level: Women's unit, paediatrics, critical care, operating theatre suite, oncology and medical secretaries;
- second floor level: In-patient accommodation (approx 73 beds), offices;
- third floor level: In-patient accommodation (approx 73 beds), trauma / orthopaedics, offices;
- fourth floor level: In-patient accommodation (approx 24 beds), administration;
- fifth floor level: In-patient accommodation (approx 24 beds);
- sixth floor level: In-patient accommodation (approx 24 beds);
- seventh floor level: In-patient accommodation (approx 24 beds);
- eighth floor level: Plant.

3.2.5. Site development proposals: Overdale Hospital



55. The new site development plan at Overdale Hospital proposes the retention of the existing Westmount Centre, The William Knott Day Hospital, The Poplars Day Centre and The Lodge. The other existing buildings on the site, once vacated by relocating any remaining clinical services to a new building within the Overdale Hospital site, are to be demolished to provide vacant sites for the new Ambulatory Care facilities.

56. The new facilities relocated from the General Hospital are to be accommodated within three separate new buildings; the largest being the new Outpatients Centre supported by two smaller buildings housing the combined Renal and Diabetes facilities and the Laboratories.
57. The new Out-patient Centre comprises:
- at level 1: Pharmacy, FM stores, staff changing;
 - at level 2: Main entrance, out-patient clinics, rehabilitation and satellite imaging;
 - at level 3: Offices, ICT and education.
58. Located in separate new buildings on site :-
- replacement Social Services' healthcare facilities (2 storeys);
 - Laboratories (two storeys);
 - Renal / Diabetes clinics (single storey).
59. The Outpatients Centre at this conceptual stage, is designed on three different split floor levels which follow the site contours and are built into the slope of the site. In addition to the outpatient clinic and treatment areas, this building also accommodates Rehabilitation services, local Imaging, the main Pharmacy, with supporting FM supplies and building management, staff changing, education and administration facilities.
60. The Laboratory facilities are provided within a two-storey building and the Renal and Diabetes clinics in a separate single storey building.
61. The existing car parking provision with spaces dispersed throughout the site has been re-planned to provide a concentrated area of parking, with a total capacity of 230 cars, located centrally between the existing retained buildings and the proposed new buildings. There is the potential to add up to a further 100 car parking spaces in an area to the south of the new Outpatients Centre but this may attract planning issues which may prevent this area being developed for this purpose.

3.2.6. Design considerations

62. In the development of the Refined Concept Design, cognisance has been taken of the investment priorities which have been identified by Health and Social Services and endorsed by the clinical and nurse leadership teams. In summary the priorities that were identified were as follows:
- 100% single bedded rooms to be provided;
 - An increase from the current 245 beds to a projected requirement of 296 beds;
 - Eight new theatres to be provided;
 - A new Paediatric department to be provided;
 - New MRI And CT scanners to be included;
 - New laboratories, pharmacy and renal departments to be provided;

- A new Accident and Emergency and critical care facility to be created.
63. The Refined Concept Design as currently proposed satisfies these priorities and in addition provides the opportunity, over a number of years of phased redevelopment of existing departments, to achieve improvements to the quality of the environments in which patients, visitors and staff are accommodated. At Feasibility Stage, it is anticipated that the Refined Concept will be developed and solutions produced which address those aspects of the design which it has not been possible to test at this stage.
64. One of the main challenges that the Project Team will require to overcome will be minimising the impact of major construction activity within the constrained site of the General Hospital, upon the ongoing day to day operations of the hospital. This will require careful consideration of the sequence of activities as each phase of development is dependent upon the preceding phase. Communication strategies will require to be developed to ensure that clinical and nursing staff, patients, visitors and prospective patients are all fully advised of the impact of the development activities, upon their normal interaction with the Hospital. Given the number of years over which development will take place, these communication protocols will need to be monitored and refreshed as more and more activity takes place on the site.
65. An assessment of the Refined Concept Design and its implications upon the ongoing functioning of the General Hospital has been undertaken. This assessment will allow focus to be applied at Feasibility Stage to the resolution of the areas of concern in respect to the clinical links between the imaging department and the emergency department and will permit the identification of potential solutions to such concerns; for example, the provision of emergency imaging facilities adjacent to the emergency department. Similarly, dialogue will take place at that stage to develop the detailed solutions that will be required in respect of fire compartmentation, horizontal evacuation principles and the like.
66. Given that the Refined Concept is predicated upon the premise of re-using wherever possible the existing building structures of the General Hospital, there are implications upon mechanical and electrical servicing zones in roof spaces, which will be determined as a consequence of new constructions requiring to tie in to existing floor to floor heights. Servicing zones will require to be provided through careful co-ordination between structural and building services elements. This will be challenging to overcome; however, given that resolution of this challenge will be key to the successful delivery of the project, effort will be applied from the outset of Feasibility Stage to fully understand and resolve such matters.
67. Whilst there is much deep planning of departments within the Refined Concept Design, the inevitable consequence of the constrained nature of the existing General Hospital site, careful thought at Feasibility Stage and well considered interior design solutions will be able to minimise the impact of limited daylight within departments and limited opportunity for planted courtyards.

68. Provided the challenges arising from the redevelopment on an existing site are fully identified and considered at the commencement of Feasibility Stage, it would be anticipated that design solutions will be capable of being developed and refined to address such concerns, prior to any construction contracts being awarded or construction activity commenced.

3.2.7. Risks

69. As identified below, there are a number of general project planning, design, construction and operational risks arising from consideration of these preliminary pre-feasibility development proposals. These risks, and others yet to be determined, will be considered in detail with relevant stakeholders at formal risk workshops at the next Feasibility Stage. Risks will be 'owned' and recorded in a risk register to ensure that throughout the design development process mitigation strategies are developed to control or eliminate these risks wherever possible, thus minimising the financial impact upon the overall project. Risks which need to be addressed include:

Risk element	Risk mitigation
Project Planning	
Achieving an affordable solution	Undertaking a service review and best practice challenge with clinicians to identify opportunities for efficiency. Robust challenge of spatial standards and cost assumptions with clinicians. Following excellent procurement practice including consideration of early contractor involvement.
Ensuring the phased solution offers good Value for Money	Development of whole life costs and review of alternative service delivery opportunities including private practice and overseas delivery of services.
The risk of delay on existing services and costs	Maintaining good project management processes and rapid and timely decision making.
Acquisition of adjoining properties	A robust and timely property acquisition process

Risk element	Risk mitigation
Design	
Constraints imposed by redeveloping the existing buildings results in sub-optimal departmental functional relationships and compromised departmental and room layouts.	Clinical and service management consultations required from the outset and throughout the design development process at Feasibility stage to understand, prioritise and reach agreement on the departmental relationships and the various service traffic flows. An understanding of any room size, height and floor level constraints to be developed.
Design solution developed fails to adequately segregate patient, staff and FM servicing flows.	Clinical and service management consultations required from the outset and throughout the design development process at Feasibility stage to understand, prioritise and reach agreement on the departmental relationships and the various service traffic flows.
More rooms than anticipated may have to be designed closer to spatial guidance areas than assumed by an average 15% reduction in overall areas, resulting in pressure on budgets.	A prioritisation of critical rooms which must attain guidance areas with consequent compensating reduction in other areas to be agreed through close consultation with clinical and service managers.
The limited floor to floor heights within the existing retained buildings lead to unacceptable building services' installations.	Fully co-ordinated design drawings and building services maintenance strategies developed throughout the design development process are required to ensure that there are no clashes and that full service maintenance access is provided.

Risk element	Risk mitigation
<p>Limited floor to floor heights in the Gwyneth Huelin Wing impact adversely on the design of proposed new-build elements tying in on either side.</p>	<p>Fully co-ordinated design drawings and building services maintenance strategies, developed throughout the design development process, are required to ensure that there are no clashes and that critical room heights and full service maintenance access is provided.</p>
<p>Unknown ground conditions Asbestos / deleterious materials / Utility Infrastructure services' connections</p>	<p>Comprehensive site investigations and surveys.</p>
<p>Planning approval related to the listed buildings on site and neighbours of adjoining properties.</p>	<p>Consideration of all alternatives before proposing any change to listing. A robust sustainability assessment process.</p>
<p>Increased cost of additional temporary building services re-routing and connection access arrangements including stairs and lifts.</p>	<p>Minimising temporary and abortive work through smart engineering design and management</p>
<p>Construction</p>	
<p>A delay in the completion of any one phase or contract results in cost delay on subsequent phases / contracts.</p>	<p>Diligent project management to monitor progress and incorporation of contractual completion penalty clauses to motivate contractors.</p>
<p>Construction inflation accelerates as economic conditions improve, resulting in latter phases being more costly than predicted.</p>	<p>Diligent project management to monitor progress, costs and to anticipate changes in predicted inflation to consider potential re-sequencing and replanning of subsequent phases to keep costs within agreed budget.</p>
<p>Risks associated with increased costs arising from construction next to an operational hospital and decommissioning of buildings to be demolished.</p>	<p>Appointment of skilled design and construction teams proficient in development of hospitals while in operation</p>
<p>Operational Planning</p>	

Risk element	Risk mitigation
Phasing imposed by demolition of central areas and subsequent re-construction, impacts adversely upon on-going hospital operations.	The early engagement of contractors in consultation with hospital and project managers to ensure the implications of all phases are understood and incorporated in development plans.
Staff dissatisfaction through delivering patient care 'on a building site' for 10 years.	Communication and close consultation with staff from the outset to ensure that anticipated work and benefits at each stage of the redevelopment process are fully understood.

4. Commercial case

70. The purpose of the Commercial Case is to set out the planned approach the States of Jersey will be taking to ensure there is a competitive market for the development of the new hospital. This in turn will determine the basis of a commercially beneficial procurement and achieve the best value for money for the development.
71. This section of the business case will be developed more fully during the Feasibility Study at Outline and Full Business Case stages during which greater detail regarding the procurement, legislative and organisational arrangements for the development will be set out.

4.1. Procurement strategy and options

4.1.1. Introduction

72. There are various procurement options that are available for delivery of the redevelopment of the Jersey General Hospital. Through analysis of the various procurement options available, along with recognition and balancing of the key project objectives and allocation of project risks, a preferred procurement strategy can be identified and recommended. The potential procurement options include:
- Traditional;
 - Construction Management;
 - Single Stage Design and Build; and
 - Two Stage Design and Build.
73. Selecting the most appropriate procurement route for delivery of the redevelopment project involves balancing the key project objectives. These have been identified as:
- programme certainty (completion by 2024);
 - overall cost certainty within budget available;
 - design quality given location;
 - cost certainty at tender award;
 - change control management; and
 - ensuring that a commercial tender returns value for money.

4.1.2. Traditional

74. Traditional procurement offers the Client a relatively high degree of cost certainty whilst having the benefit of retaining control of the design team to ensure construction detailing and client aspirations can be reflected in the design. This requires a longer lead-in time and therefore extends the pre-construction programme. Key parameters of traditional procurement include:

- the Client appoints their own design team;
- the Client controls design / quality via the design team;
- success is dependent on a well developed co-ordinated design at tender stage with robust tender documents / bills of quantities;
- the contract form can accommodate elements requiring specialist design - or a contractor's design portion;
- design changes can be accommodated;
- a longer pre-construction programme is required to allow full preparation of design tender documents and bill of quantities; and
- the Client retains the majority of design risk as this is not passed on to the contractor.

This route would result in the States of Jersey retaining the majority of project cost, programme and quality risk.

4.1.3. Construction Management

75. Construction management offers the potential to start on site more quickly than in a traditional or design and build procurement, but offers the least amount of cost certainty and risk transfer of the options being considered. Key parameters of this route are as follows:
- an appointed Construction Manager (CM) provides management / lead consultant role;
 - the Client appoints a design team to work alongside the CM;
 - work is competitively tendered in trade packages to sub-contractors;
 - the Client has a high degree of control over design and selection of sub-contractors;
 - the final cost is only ascertained upon receipt of all trade package tenders;
 - the Client engages trade contractors directly - a high level of client resource is therefore needed;
 - design changes can be accommodated; but
 - the Client retains cost, programme and quality risk almost wholly.
76. With construction management there would be a very high level of resource required by the States of Jersey as all trade packages would be procured directly by the Client. While a start on site date may in theory be quicker, this may not be realised as construction could not start prior to planning approval being received. This route would also result in the States of Jersey retaining the majority of cost, programme and quality risk and offers little cost certainty as the final cost would not be known until the last work package had been procured.

4.1.4. Design and Build - single stage or two stage

77. A Design and Build contract strategy can provide a high degree of cost and programme certainty if no client changes are instructed during the construction phase. The Client may decide to issue the tender documents (Employer's Requirements) with design specifications only or include more detailed final design information. The key risk with Design and Build is a lack of control on quality, particularly if the design is not developed to a detailed stage, as the contractor has the scope to reduce the quality of the design and construction materials. The key parameters for Design and Build are as follows:

- the Client appoints a design team to prepare Employer's Requirements (ERs);
- the Design team can be novated to contractor or retained as adviser;
- the Contractor takes responsibility for cost, time and quality in exchange for a lump sum payment;
- success relies on Employer's Requirements truly reflecting the Client's key requirements;
- the Contractor controls design / quality on site;
- design changes can be accommodated - but usually at a cost premium;
- cost and programme risk is transferred to the contractor;
- the contract form may result in lower quality if robust Employers Requirements are not developed.

4.1.5. Single stage Design and Build

78. In the single stage option, and in comparison to two-stage Design and Build contracts, the design is usually taken to a more detailed level (RIBA Stage 3 or 4) and competitively tendered at that stage. The appointed contractor will then complete the design and commence construction. A single stage tender allows a single price to be received based on the design and specification set out in the Employer's Requirements and to a fixed programme completion date. The contractor may build in some cost risk if the design is not fully developed, but this can be offset as there is no negotiation of a second stage price. While the contractor retains the cost, programme and quality risk to the levels agreed in the Employer's Requirement documents the contractor may seek to exclude certain risks such as planning and building warranty acceptance. Due to the current construction market it is considered that contractors may accept such risks if these are well understood. For example, planning risk may be accepted if the Planning Officer's report is recommending approval. Initial Building Warranty risks may be negated by submission of a staged Building Warranty prior to novation.

4.1.6. Two stage Design and Build

79. In the two stage design and build option, the contractor is appointed for the first stage based on minimal design information with a price for preliminary costs and contractor profit only. The design is progressed with involvement from the contractor, and the work

packages for the construction phase are procured. Once approximately 70% to 80% of the work packages have been procured, a second stage and final price for the works is negotiated. While this route may offer the benefit of early contractor involvement there is a significant risk that the contractor would offer a very low first stage tender price and then seek to substantially increase the cost through the second stage negotiations. As the contractor may be aware of particular fixed completion dates, this may greatly reduce the negotiating power of the Client's commercial team. There would not be the opportunity to change to a second placed contractor if best value or the costs required within the development appraisal were not being achieved. This could result in a protracted negotiation period and/or a premium price being paid by the Client.

4.2. Site and phasing proposals

80. The refined concept proposals divide the proposed redevelopment between the General Hospital site and sites at Overdale Hospital. Within these two hospital sites, the works are such that they could be further separated into a series of different phases or contracts of differing technical complexities and contract size. These offer varying opportunities for contractors of different sizes and experience and should offer more contractual opportunities to match the experience and capabilities of local suppliers.
81. The redevelopment works will be split into a series of phases dictated by the availability of vacant sites or buildings for redevelopment. There are not any available vacant sites within the boundary of the General Hospital site which are suitable for the redevelopment and expansion of the existing hospital facilities. Consequently, the major reconfiguration works of the existing General Hospital cannot commence until such sites become available following the relocation of a number of clinical and support departments, either to other areas of the hospital or off-site to Overdale Hospital. The proposal, to relocate the Out-patients' departments with associated supporting pharmacy and diagnostic laboratory facilities to Overdale Hospital to create an Ambulatory Care Centre, allows the existing out-dated buildings adjacent to the Gwyneth Huelin Wing to be demolished, clearing a significant area of the existing hospital for redevelopment. The redevelopment works can, in general terms, be summarised in the following packages or phases:
 - Phase 1: Overdale Hospital enabling works:
 - At Overdale Hospital, construct new replacement social services healthcare facilities and relocate the existing services which are to be retained on site to these new facilities, allowing the demolition of the old buildings to be carried out, thus clearing the site for the new Ambulatory Care facilities.
 - Phase 2: Overdale Hospital Ambulatory Care Centre:
 - construct the new Ambulatory Care Centre buildings, comprising the separate Out-patients' building, The Renal and Diabetes building and the Laboratories.
 - creation of a new catering facility at Five Oaks to serve the redeveloped General Hospital.

- concurrent with the development at Overdale Hospital, a first contract at the General Hospital can commence with the construction of the proposed extension to the 1980's Building;
 - on completion of the construction of the extension to the 1980's building, relocate the existing In-patient facilities within the Granite Building to permanent or temporary locations within the newly constructed ward extensions to the 1980's Building. Strip out the vacated areas and construct the planned new facilities in these areas.
 - **Phase 3: Jersey General Hospital enabling works:**
 - on completion of the construction works and bringing into operation the new Ambulatory Care Centre at Overdale Hospital, relocate elsewhere within the General Hospital any remaining facilities within the Gwyneth Huelin Wing and the buildings on both sides of it;
 - **Phase 4: Jersey General Hospital new-build construction works:**
 - demolish the buildings on both sides of the Gwyneth Huelin Wing and construct the new buildings on both sides of the Gwyneth Huelin Wing, tying these into new replacement accommodation on each floor of the Gwyneth Huelin Wing.
 - **Phase 5: Jersey General Hospital refurbishment construction works:**
 - carry out the proposed alterations and refurbishment of the existing In-patient Ward within the 1980's Building in a rolling programme, refurbishing a single floor at a time.
82. Within the above broad phasing proposals, there will be numerous sub-phases of enabling works and temporary or permanent relocation of individual facilities to allow the larger phased construction works to proceed.

4.2.1. Jersey General Hospital

83. The proposed works at Jersey General Hospital can be split into the following three categories, each of which will have different contractual characteristics and will offer different opportunities for contractors of varying sizes, capability and experience:
- **New-build construction: potentially two separate contracts:**
 - the new extension to the 1980's Building; and
 - the larger; and more complex construction of the new buildings on both sides of the Gwyneth Huelin Wing. This latter contract will be tied in with the alteration and refurbishment of the Gwyneth Huelin Wing and will form the largest, and most complex contract within the proposed works.
 - **Major alterations arising from the replacement of existing facilities within existing buildings with different, new facilities.** This will comprise works predominantly on

the first and second floors of the Granite Building but also, potentially, the main entrance ground floor area of the 1980's Building.

- Refurbishment of facilities which will remain in their current location but which will require some minor alteration works. This relates predominantly to the refurbishment of the In-patient Wards in the 1980's building.

4.3. Criteria for selection of procurement route

84. The selection of a procurement route should take account of the particular characteristics of each project. In particular, the client's requirements in respect of cost certainty, ability to make changes to the design and programme must be considered. The table below sets out the characteristics the four procurement routes with respect to a number of potential criteria for a construction client.

Criterion	Objective	Likelihood of procurement route achieving criterion			
		Traditional	Construction Management	Single stage D&B	Two stage D&B
Timing	Early completion	Low	High	Low - Med	Med
Cost	Price certainty before construction start	Med	Very Low	High	High
Quality	Prestige level in design/construction	High	High	Low	Med
Variations	Avoid prohibitive cost of change	Med	Low	High	Med
Complexity	Technically advanced / complex buildings	High	High	Low	Med
Responsibility	Single contractual link for project execution	Low	Low	High	Med
Professional	Need for design team to report to client & users	High	High	Low	Med
Risk avoidance	Desire to transfer complete risk	Low	Very Low	High	Med
Buildability	Contractor input to design process	Low	High	High	Med

85. When reviewing the above considerations, the Traditional form of procurement offers strong potential for controlling quality and to a slightly lesser extent cost, and being appropriate for complex, technical buildings, but offering little in the way of risk transfer from the States of Jersey to the contractor, nor the advantages which could be gained by the early involvement in the design process offered by Design and Build contracts. However, this form of contract may be suitable for some of the smaller, new-build projects, e.g. the separate Laboratories' and Renal Buildings at Overdale Hospital, or the localised, more easily defined alteration and refurbishment works within the Granite Building and the 1980's Building within the General Hospital, and these may fall more within the capability and experience of local contractors.
86. Due to the lack of cost certainty and the consequence of the States of Jersey retaining a high degree of cost and other risks, it is unlikely that this procurement route would be appropriate and acceptable to the States of Jersey for larger contract forms.
87. Similarly, the above risk reservations also apply to the Construction Management route, with the additional resource burden placed on the States of Jersey's management of the procurement of the trade packages and, consequently, this procurement route may not be considered to be appropriate and acceptable to the States of Jersey.
88. From the above table it can be seen that the spread of risks and likelihood of gaining cost certainty are similar when comparing the single stage and the two stage Design and Build procurement routes, with a marginally more favourable outcome using a single stage route. This, coupled with the potential risk of a protracted negotiation period and/or a premium price being paid by the States of Jersey, would tend to reinforce the single stage route as a preferred option, particularly for the highly complex and high risk works associated with the alteration and new-build extension of the Gwyneth Huelin Wing.
89. However, it is acknowledged that this approach can only be preliminary at pre-feasibility concept stage and it is recommended that the final decision with regard to the appropriate contract form for different work packages await the development of more detailed design work and consideration by the appointed design team of the most appropriate risk allocation during the Feasibility Stage.
90. The following table summarises the potential available procurement routes which should be considered further for each of the likely different building contracts.

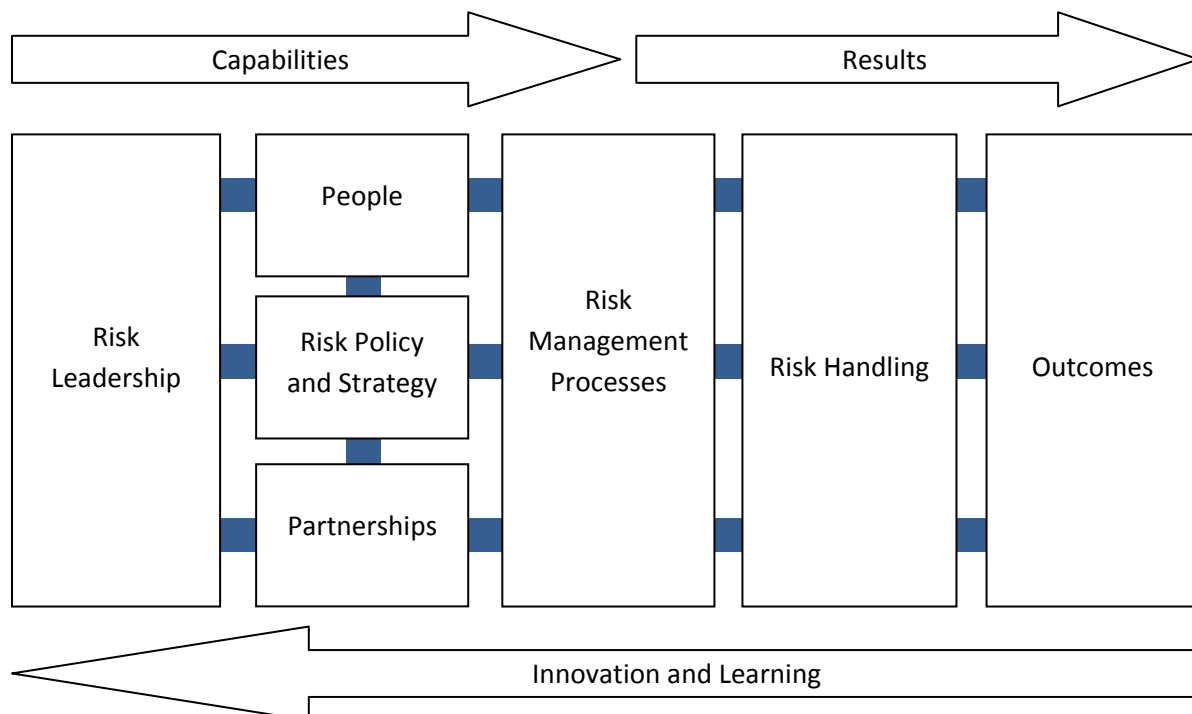
Location / Building	Description of Works	Traditional	Single stage D&B
Jersey General Hospital			
1980's Building Extension	Predominantly new-build with alterations at junction with existing building	Possible	Advantages of being tie into the Gwyneth Huelin contact with one contractor being involved at an early stage in designing and carrying out all the major works.

Location / Building	Description of Works	Traditional	Single stage D&B
Alteration and extension of Gwyneth Huelin Wing	Complex alteration and new-build extension of highly technical facilities		Preferred, to get early involvement of the contractor in the design process and the transfer of risks to the contractor.
Major alterations to the first and second floors of the Granite Building	Stripping out vacated accommodation and re-building to suit new facilities	Preferred	
1980's Building	Refurbishment and minor alterations to the In-patient Wards	Preferred	
Overdale Hospital			
New Out-patients' Building	Large, but relatively simple, new-build construction project	Possible	Programme advantages in early involvement of a contractor. This project has to be completed on programme, as the major works at the General Hospital cannot commence until it is completed and becomes operational.
New Renal / Diabetes Building	Small, relatively simple new-build works.	Possible, and would suit local contractors.	May be an advantage in only having a single contractor to manage on site.
New Laboratories	Small, but technically complex new-build works.	Would suit local contractors if traditionally fully designed and tendered.	May be an advantage in only having a single contractor to manage on site.

91. An issue which might affect the selection of the procurement process and the number and size of the different contracts that are proposed relates to the number of different contractors which can be accommodated and managed without interfering with or restricting each other's works if working concurrently on different parts of a site or building. For example, there is limited free area on either of the two hospital sites which is not being redeveloped in some form. Consequently, careful consideration will need to be given to identifying suitable areas for contractors' compounds and lay-down area during the major parts of the works on both these hospital sites.

4.4. Potential for risk transfer and risk management strategy

92. The general principle is to ensure that risks should be passed to ‘the party best able to manage them’, subject to value for money (VFM) assessments. Such an approach will comprise part of the overall risk management strategy that will be adopted as part of the project.
93. The risk management strategy will follow H M Treasury guidance on developing an effective strategy as contained within ‘The Orange Book - Management of Risk, Principles and Concepts’, developed further as part of the Risk Management Assessment Framework. A graphical summary of the structure to the approach is reproduced below.



94. Initial consideration, as part of the initial risk management and handling process of risk transfer is outlined below and is summarised from the Office of Government and Commerce approach to handling long term contracts.
95. The States of Jersey will assess the suitability of future partnering arrangements based on a structured assessment of its own capabilities to manage the development contract based on outcomes, outputs or inputs (in order of decreasing scope for partnering approach) and comparing the results of such a review with an assessment of the market place and its ability to deliver the project along this partnering spectrum of scope. The greater the ability to contract and manage the development through partnering, the greater will be the ability to share a greater proportion of development risks.
96. The following list outlines the areas that can be considered as having potential for risk transfer and allocation between private sector providers of goods or services and The

States of Jersey. The procurement route which will be decided as part of the OBC feasibility stage will set the level of risk transfer available to the development project for the following risks in accordance with guidance:

1. Design risk;
 2. Construction and development risk;
 3. Transition and implementation risk;
 4. Availability and performance risk;
 5. Operating risk;
 6. Variability of revenue risks;
 7. Termination risks;
 8. Technology and obsolescence risks;
 9. Control risks;
 10. Residual value risks;
 11. Financing risks;
 12. Legislative risks;
 13. Other project risks.
97. The allocation of risks will be considered in formal workshops and identified in a Risk Register at the next Feasibility and Outline Business Case stage and will be subject to continuous review and amendment as detailed risk assessments are developed and the procurement strategy and process is finalised. Such risks could potentially be allocated contractually within the final agreement and associated payment mechanisms.

5. Financial case

99. The purpose of the Financial Case is to set out the indicative financial implications of the preferred option (as set out in the Economic Case in chapter 3). This incorporates the identification of the capital costs associated with the preferred short-listed option and the consequential relevant revenue costs associated with the development. This section develops the impact of the redevelopment in the light of the whole quantum of cost that is relevant to the operation of the proposed new hospital facilities.
100. The procurement route that will be used for this development is to be finalised following acceptance of this Addendum to the Strategic Outline Case; at that point the most appropriate accounting treatment of the future assets can be considered and incorporated into the affordability calculations. The Addendum to the Strategic Outline Case at present therefore does not indicate the effect on the balance sheet of the future development nor does it include for the effects of depreciation within the current quantum of costs used as a baseline for this affordability assessment.

5.1. Funding strategy

101. The States of Jersey maintains a healthy balance sheet valued at more than £2bn with significant reserve/funds in the region of £3.4bn, some of which do not form part of the consolidated balance sheet. The accounts clearly demonstrate the effects of the decisions taken to safeguard Jersey's public finances and maintain a strong position compared to many other jurisdictions across the world.
102. The States has taken the position of not undertaking significant borrowing to underpin its capital investment programme and where borrowing has been permitted an income stream has been identified to meet the cost of borrowing.
103. The Future Hospital project is one of a number of large scale capital investment projects that the States will be required to undertake in the next ten years. The States of Jersey's Treasury and Resources Department have carefully considered options to meet these funding pressures and is proposing an approach that combines external borrowing for projects with a defined income stream and the use of a proportion its Strategic Reserve for the Hospital project.
104. The Strategic Reserve will be reimbursed through investment returns generated by the Common Investment Fund to ensure it remains above a targeted minimum level. By doing this, it will not only help the States deliver effective services, but also help boost the economy and safeguard the island's capital infrastructure for generations to come.
105. It is recognised, that the States needs to implement this funding structure to support the delivery of its overall objectives and give sufficient flexibility to support the diverse activities across the States of Jersey.

106. The proposed solution will be tabled to the States Assembly within the proposition relating to the 2014 Budget Proposals, in compliance with Article 21 of the Public Finances (Jersey) Law 2005.

5.2. Assessment of revenue costs

107. This financial section of the Addendum to the Strategic Outline Case applies the revenue effects of the redevelopment to its overall quantum of cost as well as developing the assessment of the future revenue costs associated with the effects of demography and future service and performance strategies that have been outlined above in chapter 2, the Strategic Case. The Outline and Full Business Case will further develop and finalise these overall affordability assessments as the detailed design and planning processes serve to firm up the assumptions contained within the Strategic Outline Case.
108. The anticipated revenue stream for the acute hospital has been assessed and developed by referencing the revenue impacts of the following relevant issues:
- Establishing the baseline quantum of costs for the new hospital provision. The quantum for 2013 has been analysed and projected forward, based on a range of cost drivers that are considered most applicable to each cost category;
 - Cost drivers are based on future activity assumptions when service related (e.g. future numbers of patient attendances) or are area related when costs are most often associated with the area that a hospital occupies (for example cleaning or heat and light costs);
 - The quantum of cost has been projected forward 30 years. Future activity taking account of demographic changes and capacity projections along with future hospital areas and the manner in which the functional content of the hospital will be arranged all impact on the future quantum of costs;
 - Inflation has been included within the financial modelling; the effects on future costs can be viewed both with and without the effects of inflation. Inflation has been applied as advised by the States of Jersey's Treasury at a combined rate of 2.5% per annum.
109. The budgeted quantum of revenue cost for the hospital is £105.3 million. Increases in activity as a result of demography coupled with the effects of performance changes result in a predicted increase in the quantum of cost to £137.4 million at 2042 before the effects of inflation are added in. Inflation is assumed to run at 2.5% per annum over the course of this forecast, the total quantum with inflation is estimated at £278.1 million. The detailed assessment is contained within Appendix 7.
110. The above increases include a high level estimate for the additional financial consequences of split site working. Much of the current quantum of costs will remain the same for those activities planned to occur at Overdale, away from the main site. There will however be some specific additional revenue costs regarding transport to and from

Overdale as well as the requirement to include estimates regarding levels of resource required to manage service delivery on a split site basis. Such increases in cost include ensuring additional staff are available to provide services across two sites at the same time instead of providing some level of cover across two departments when operating in close proximity to each other. There will also be additional costs associated with ICT, portering, security across two sites and management of departmental interfaces which are working across two sites instead of one.

111. Additionally, the costs of transporting staff and supplies between two sites and the cost of providing a public transport service for the high number of ambulatory patients visiting Overdale has been included in the calculation.
112. The high level estimates of additional costs associated with split site working total £1.4 million per annum (inclusive of public transport costs per year of £550,000). Such an additional cost represents 1.3% of the current total revenue cost and 1% of revenue costs in 2042. This 1% recurring additional cost is the consequence of utilising a split site option in order to meet the requirements for future capacity within the constraints of available sites for redevelopment.
113. The estimate is presently high level, requiring detailed calculation and verification of assumptions made at this time, based on evolving patterns of care and consequential staffing levels.
114. The relevant cost analysis which is contained within the discounted cash flow summary (establishing net present cost) identifies that by 2040 an additional revenue budget of £6.9 million will be required in addition to further increases due to either inflation or other demographic or service development pressures. These additional relevant costs are solely associated with the development of the new hospital as a split site as described above as well as incorporating modern space standards, circulation areas, a move to single bedroom layouts and inclusion of lifecycle and maintenance costs associated with the redeveloped hospital. Appendix 7b details the relevant costs as part of the net present cost summary.

5.3. Ten-year programme of maintenance costs

115. To ensure that the entire hospital capacity remains fit for purpose throughout, a ten-year programme of maintenance and replacement of building fabric and services has been identified with a maximum annual budget of £5 million.
116. In assessing the programme of major maintenance activities to be undertaken over this ten-year period, reference has been made to the development plans to ensure that where equipment or plant is replaced it takes into due account the future projected demands that would be placed upon it by the redevelopment. In certain instances, the capacity of the replacement will be reduced owing to the change in overall engineering servicing philosophy brought about by the redevelopment. Due to the scale and spread of the maintenance work throughout a number of buildings, the proposed programme for a

number of the individual items identified below is spread through a number of years; details of this programme is identified in Appendix 6b.

117. The schedule of major maintenance has considered each system, service or energy source in turn reviewing its age, condition and relevance to the redeveloped site. The timing of the major maintenance investment has been driven by the existing system's or source's age, and also by reference to the redevelopment phasing plan.
118. The scope of the scheduled major maintenance work is detailed below; all items are to be retained under the proposed redevelopment serving main retained areas and departments:
 1. Replacement Primary Electrical System; incoming HV Intakes transformers and switchgear, LV switchgear, rising Busbar distribution, and standby Generators;
 2. Replacement Bed and Passenger lifts - Parade Block;
 3. Replacement Emergency Lighting Systems;
 4. Replacement Boiler House Flue;
 5. Replacement of main Boilers;
 6. Replacement Pumps and circulators;
 7. Replacement Heating and Hot Water Calorifiers;
 8. Replacement Chilled Water Chillers;
 9. Replacement Air Handling Units and Extract Fans;
 10. Replacement Building Management System;
 11. Replacement water Treatment Plant;
 12. Replacement of Fuel Oil Storage;
 13. Upgrading of Operating Theatres 1&2, fabric, electrics and internal specialist ventilation;
 14. Replacement of Computer Centre and other UPS backup systems;
 15. Replacement of the sites Medical Gas Manifolds and Oxygen Concentrators;
 16. Works allowed for repair to underground drainage systems;
 17. Works allowed for the replacement of internal drainage systems;
 18. Minor Ward refresh works;
 19. Maternity Delivery room upgrading including provision of entinox;
 20. Special Care Baby Unit upgrading and replacement of Medical Supply units;
 21. Main Kitchen replacement works, Cold Rooms etc.;
 22. External Fabric works.

5.4. Assessment of capital costs

119. A costing exercise was undertaken for each of the short-listed options. The costs which have been included as relevant to the decision are as follows:

- Capitalised Construction Costs incorporating:
 - Construction costs based on UK Department of Health Departmental Cost guidance notes;
 - Site specific construction on-costs which vary between sites;
 - Professional fees for both internal and external professional services that will be required to be engaged to complete the project;
 - Equipment costs to cover specialist and loose equipment supplied by the States of Jersey and not included in the departmental costs above;
 - Contingencies covering a 5% planning approval risk and a 10% optimism bias;
 - An inflation adjustment taken at the mid-point of the construction process based on quarterly data published by Building Cost Information Services; and
 - A provisional location adjustment (uplift) factor to take into account differences in tender prices between the Jersey market and normalised UK Department of Health cost guidance. A combined uplift figure of 22.8% of works costs has been incorporated into the overall capital cost calculations.
- Non-works costs incurred to make a site available for development, such as land acquisition.

120. A more detailed explanation of these costs is included in Appendix 6b.

5.5. Affordability

121. The hospital content has been considered according to UK NHS best practice and with modern standards and the project detailed in accordance with best practice cost information for a project at this stage of development.
122. Considerable challenge to the hospital provision has been undertaken as part of the development of P.82/2012 resulting in assumptions being taken about the successful implementation of community and other health strategies, which will limit the size and hence the cost of a new hospital.
123. Ministers advocated that the following process of challenge as necessary to give greater certainty to cost proposals during the feasibility process.
- Development of new hospital facilities will require a detailed and fundamental review of all hospital services to benchmark these against best practice and identify the best means of delivery that offers optimum value for money. The review will include a detailed assessment of private sector provision, income generation, provision off-island and opportunities presented by remote care and medical technology. This review will develop output specifications that can then inform a revised blueprint for a new hospital.
 - Development of a phased solution should be considered that would limit the risk of investment exposure to the States of Jersey but retain a viable and improving

hospital at all stages. This will necessitate clinical engagement to ascertain and agree the extent of clinical services provided within each development phase to ensure a workable continuity and an expansion of the clinical services provided within the whole hospital to meet the clinical models of care at each stage.

- Early contractor engagement and a buildability assessment would be considered to ensure that the construction period is minimised and opportunities taken to drive out value.
124. Ministers considered the maximum affordable funding envelope for investment in the Hospital through the withdrawal of funds from the Strategic Reserve to be £250m with no prospect of a further significant injection of funding to meet the cost of any future phases.
125. Having set this as a target funding limit, Ministers required officers to consider alternative strategies to maximise the value achievable, particularly with regard to priority areas defined by the Health and Social Services Department and focussing on improving the patient experience.
126. The current proposals are based upon a project budget of £275m, which includes an additional allocation of funding to provide transitional bed capacity and the inclusion of a Linear Accelerator (LINAC) facility that was not in the original brief.
127. Discounted cash flow appraisals were undertaken as part of the Pre Feasibility Project Strategic Outline Case in order to inform the assessment of the preferred option for redevelopment at that time. Whilst the revised scope focuses on one option for redevelopment as described above, the discounted cash flow analysis associated with the revised scope option is detailed in Appendix 7b.

5.6. Appraisal and Evaluation

128. Appraisal and evaluation are essential parts of good financial management and will therefore be undertaken during the feasibility process.
129. Good appraisal entails being clear about objectives, thinking about alternative ways of meeting them, estimating and presenting the costs and benefits of each potentially worthwhile option, and taking full account of.
130. Good evaluation after the event entails many of the same processes, together with a desire and willingness to look for better ways of doing things.
131. [The Green Book, Appraisal and Evaluation in Central Government](#) published by HM Treasury provides more detailed guidance on the principles, techniques and procedures applicable in relation to appraisal and evaluation. This approach is followed by the United Kingdom devolved administrations and it is proposed this will be adopted for the appraisal of affordability for the future hospital feasibility project.

132. Pre-funding appraisal will be carried out as part of the feasibility study to establish an ordered, but flexible, general approach to the analysis of proposals with implications for expenditure / use of resources. It should include not only economic analysis, but also other important information such as financing implications, arrangements for project management and plans for subsequent monitoring and evaluation. The appraisal will include the following steps:
- define the objectives;
 - consider a range of options;
 - identify, quantify and value the costs, benefits, risks and uncertainties associated with each option, including considerations of public private partnerships and the scope for shared services arrangements with other public bodies, optimism bias and distributional implications;
 - analyse the information;
 - decide what evaluation should be performed at a later stage; and present the results.
133. The analysis will not always point to a clear-cut recommendation. There may be risks and uncertainties attached to costs, benefits or both. There may be significant elements that cannot be easily quantified in monetary terms. For each option, the impact of all relevant factors and related risks and uncertainties will be set out systematically and an assessment made of where the balance of advantage lies.
134. Pre-Expenditure Assessments will be undertaken. The process involves assessing:
- the aims and objectives of the proposal;
 - the options for addressing these objectives;
 - the evidence base on the likely economic, social, and environmental impacts and value for money of the proposal, including cost-benefit analyses where appropriate;
 - the financial and management arrangements for the proposal, including an assessment of the key risks to successful delivery;
 - the plans for monitoring and evaluation.
135. Evaluation examines the outturn of a project, programme or policy against its objectives. It adds value by providing lessons from experience to help future management or development of a specific project, programme or policy. Evaluation will be planned from the outset of the project, and should normally include the following steps:
- establish exactly what is to be evaluated and how past outturns can be measured;
 - choose alternative states of the world and/or alternative management decisions as counterfactuals;
 - compare the actual outturn with the target outturn, and with the effects of the chosen alternative states of the world and/or management decisions;

- draw up the results and recommendations; and
- disseminate and use the results and recommendations.

6. Management case

136. The Management Case of the Strategic Outline Case addresses the 'achievability' of the scheme. It sets out the actions that will be required to ensure the successful delivery of the scheme and describes how it will ensure the project will be managed effectively.

6.1. Project management arrangements

137. This project is an integral part of the Health and Social Services Transformation Programme as set out in 'P.82/2012: Health and Social Services: A Way Forward'. The relationship of this project to that programme has been set out in chapter 2, the Strategic Case, of the previous full Strategic Outline Case report. Separate governance arrangements are in place for that wider programme.
138. Details of the required project reporting structure, management arrangements, appointment of specialist advisors and specific planning work programmes which will require to be put in place can be found in Chapter 6 of the previous full Strategic Outline Case report.

6.2. Timescales for the development

139. If the Strategic Outline Case for the proposed new hospital finds favour as part of proposals for transforming Health and Social Services considered by the States, the intent would be to establish at the earliest opportunity a multi-disciplinary Construction and Design Team to undertake a Feasibility Study for the approved site. Project Milestones will be developed in detail; the following Figure identifies outline project milestones.

Figure 6.1: Project milestones and initial anticipated dates

Milestone	Redevelopment Programme
Consideration of funding strategy and pre feasibility outcome as part of Budget 2013 Debate by the States Assembly	October - December 2013
Appointment of Feasibility Design Team	December 2013
Feasibility study Enabling works and Relocation of services at Overdale Hospital Planning applications for Enabling Works and Masterplan	January 2014 - June 2015
States approval of construction procurement strategy	September 2015

Milestone	Redevelopment Programme
Mobilisation of Contractors	October - December 2015
Westmount Health Quarter Construction Extension of 1980's Block Construction =	January 2016 - December 2018
General Hospital New Build Construction	January 2019 - December 2021
Refurbishment of General Hospital	January 2022 - December 2024

6.3. Support for the project

140. The States of Jersey stakeholders for this development have expressed their support as follows:
- the Treasury and Resources Department Jersey Property Holdings have overseen delivery of the project with the support of the Project Team;
 - the Health and Social Services Senior Management Team have supported the development of the SOC throughout the process of production;
 - the Hospital Executive Management and Clinical Directors of the hospital have been consulted and informed the proposed model of care;
 - The Ministerial Oversight Group, supported by the Ministers for Planning and Transport and Technical Services, agreed in September that the refined concept was appropriate to recommend to the Council of Ministers for progression to feasibility study.
 - The Council of Ministers agreed in October that the refined concept was suitable to recommend to the States Assembly for funding within proposals for the Budget 2014.
141. In December 2013, in order to facilitate progress of the refined concept to the next detailed feasibility study stage, the States Assembly will consider the Council of Minister's recommendation for a funding strategy for a new and refurbished hospital together with funding of transitional arrangements and site purchase.

7. Summary

7.1. The need for change

142. The reasons for change and why a new hospital is required have been clearly set out in the States of Jersey's Papers P.82/2012 and R.125/2012.
143. It is increasingly inappropriate to continue to provide clinical services in the existing hospital facility, which do not meet current building and operational standards, and do not cater for current and projected future clinical demands. In particular, the following aspects are cause for concern:
- the existing provision of functional types, sizes and relationships of rooms do not meet current healthcare design guidance, space standards and current best working practices. There are a number of significant compromises in the configuration of the existing hospital which have arisen as a consequence of the staged development of the site over the past 150 years;
 - the existing provision of the numbers of beds available and the provision of single bedroom accommodation does not meet current emergency demand, nor projected future daily demands whilst operating at recognised best practice occupancy rates;
 - the current configuration of the general hospital results in increased risks arising from control of infection issues and fire compliance issues which cannot be fully addressed within the existing accommodation without significant refurbishment.

7.2. Conclusion of this Strategic Outline Case

144. The conclusion of this Addendum to the Strategic Outline Case is that to achieve the objectives of States of Jersey's Papers P.82/2012 and R.125/2012, within the affordability envelope subsequently identified by the States' Treasury Department, it is proposed that development of a Health Campus for ambulatory care and support services, located on the Overdale Hospital site be undertaken to enable a phased redevelopment of the General Hospital site for acute health care services to follow.
145. The redevelopment envisaged at this Pre-Feasibility Stage, will allow the provision of the in-patient acute care facilities within refurbished or new build accommodation on the General Hospital site and the provision of the majority of out-patient facilities, laboratories and pharmacy in new-build accommodation constructed on a cleared site at Overdale Hospital.
146. In particular, the refined concept proposal enables the following key investment priorities identified by Health and Social Services to be achieved:
- 100% single bedded rooms are provided;
 - an increase from the current 245 beds to the projected requirement of 296 beds can be achieved;

- eight new theatres are provided;
- a new Paediatric department is provided;
- new MRI And CT scanners are included;
- new laboratories, pharmacy and renal departments are developed;
- a new Accident and Emergency and critical care facility is created.

In addition, all other clinical departments receive a significant refurbishment such that improvements are achieved throughout the clinical elements of the hospital.

147. The redevelopment of the General Hospital site is not without risk given the scale of refurbishment required and the necessity to continue to deliver clinical services safely whilst major building and engineering works are underway in close proximity to patient areas; however, with careful and detailed pre-planning, much of the risk can be identified and mitigation strategies put in place to minimise their impact. Residual risks will be managed through prudent control of contingency allowances included within the overall budget for the project.
148. Dialogue has taken place with representatives from the clinical and nursing groups, as well as health management and agreement in principle has been secured in respect of the 'split site' solution now proposed. Whilst there will be elements of inefficiency arising as a consequence of operating over two hospital sites, there will also be benefits in streaming ambulant patients to out-patient clinics at Overdale and concentrating all in-patient, surgical and diagnostic activity into new and refurbished accommodation on the General Hospital site. It is important that regular communication is maintained with the clinical and nursing groups to ensure that proposals developed at feasibility study stage secure ongoing support from these key stakeholders.
149. The development proposals envisaged at this pre-feasibility stage, will be capable of being progressed as a series of individual contracts and this will likely allow greater participation by local contractors and supply chains than would have been the case, had a single, large development been selected for the General Hospital site alone. It is probable that the development of the laboratories and renal / diabetes units could be undertaken by local island contractors with the main out-patients facility at Overdale likely to require input from a larger international contractor. On the General Hospital site, it is envisaged that a larger international contractor would undertake the construction / refurbishment of existing faculties to create the emergency department, day surgery, operating theatre suite, critical care and paediatrics units; local island contractors could potentially undertake refurbishment of the women's unit, imaging and oncology, as well as phased refurbishment of the bedded accommodation in the 1980's block.
150. The multi-phased re-development approach promoted in this addendum SOC will, take place over a considerable time frame. It will be imperative that a thorough examination of programming of the envisaged works is undertaken at feasibility stage, as each phase is fundamentally dependent upon the prior phase being completed and operational before

further works can proceed. Once the overall programme for the redevelopment has been established, it is unlikely that any acceleration of individual phases will benefit the overall delivery timetable; conversely, any delay within any phase is likely to have a direct adverse proportional impact upon the overall timetable.

151. A potential benefit of a multi-phased redevelopment will be the opportunity to expand or contract the content of subsequent phases, in recognition of available funding.
152. The multi-phased redevelopment of the General Hospital site for acute in-patient care and the development of the Overdale Hospital site for ambulatory care and central laboratories will result in the following:
 - the provision of new and refurbished health care facilities which will permit the delivery of health services in a safe, sustainable and affordable environment;
 - the retention and re-use of significant parts of the existing health estate, thereby maximising the value of investment already made;
 - the establishment of a new ambulatory care / outpatient facility on the Overdale Hospital site which will allow the streaming of patients to facilities best placed to satisfy their health needs;
 - the phased redevelopment of the General Hospital which will allow the retention of parts of the existing estate and will allow the provision of new operating theatre suites, critical care, paediatrics and emergency departments, designed to take cognisance of current space and engineering standards;
 - the opportunity for greater involvement in the redevelopment of local island contractors and supply chains, to the benefit of the local economy.
153. There is now a need to undertake a detailed feasibility study to establish the key phasing and servicing strategies which need to be in place to permit safe ongoing delivery of health care services. The feasibility study will need to include the following elements:
 1. the establishment of appropriate Governance linked to the wider programme of Health and Social Services Transformation and a suitable and appropriately resourced cross-disciplinary professional Project Team for the duration of the development until operational use and aftercare;
 2. to support, inform and facilitate the consultative development by the Health and Social Services Department of Service Plans (following best practice service reviews), Models of Care, Whole Hospital Policies and Operational Procedures for sustainable Hospital services in the form of an Acute Services Plan;
 3. from the Acute Services Plan, Clinical Output-based Specifications will be developed with the Health and Social Services Department defining the scope of service, activity indicators, work patterns, key operational processes, functional requirements, key departmental inter-relationships and design guidance arising to inform hospital development;

4. the consultative development with the Health and Social Services Department of a Concept Masterplan Design (Stage 2 of RIBA Plan of Work 2013) for new Hospital capacity, to be developed in defined phases in accordance with clinical need and affordability, and a coordinated, costed and sustainable Developed Design and Technical Design (Stages 3 and 4 of RIBA Plan of Work) for the development phases of new hospital capacity;
5. the preparation and approval of an Outline and then (following States Assembly consideration) a Detailed Planning Application, incorporating a full Sustainability Assessment (incorporating Environmental and Health Impact Assessments) for the Masterplan and then phases of the development;
6. preparation and approval of an Outline and then a Full Business Case for the development phases of the new hospital capacity, following HM Treasury Green Book principles, including full funding proposals. An indicative funding requirement will be required to enable the States to consider the proposed funding strategy for the hospital in advance of their consideration of the procured recommended solution for the phases of development within the Full Business Case;
7. development and approval of a procurement strategy for the acquisition of the property and other assets required to enable the project to be constructed;
8. procurement of the optimal value for money partner / construction consortium for delivering the construction of new hospital capacity on the preferred sites, including appropriate local business involvement. This will include the consultative development of a Construction and Implementation Plan for the phases of development prepared with the Health and Social Services Department;
9. recommendation of the preferred solution to the States within a Report and Proposition and then finalisation of the contract for delegated approval by the Minister of Treasury and Resources; and
10. development, proposal and procurement of the necessary Transitional Facilities and identification of the necessary refurbishment and maintenance investment for the current Hospital that will enable its viable operation until the new hospital capacity is available in the form of a (Health and Social Services) Estates and Facilities Strategy.

ATKINS

200 Broomielaw
Glasgow G1 4RU

Tel: 0141 220 2000
Fax: 0141 220 2001

