
**JERSEY FUTURE HOSPITAL
CO004 – SITE OPTION REPORT**

APPENDIX 28 Data Book

QUALITY ASSURANCE

Sign off: Nigel Aubrey

Position: Director

STATES OF JERSEY

FUTURE HOSPITAL PROJECT

CHANGE REQUEST NR. 4 – DATA BOOK

Main Body Report

Location	Subject	Source materials
4.1	Introduction	<ul style="list-style-type: none"> FH 1.6 Change Order 004 – Variation to Options Appraisal - 20141230
4	Reaffirmation of previously rejected sites	<ul style="list-style-type: none"> Strategic Outline Case prepared by WS Atkins Appendices to Strategic Outline Case prepared by WS Atkins Strategic Outline Case Refined Concept Addendum prepared by WS Atkins Appendices to Strategic Outline Case Refined Concept Addendum prepared by WS Atkins
4	Site Options	<ul style="list-style-type: none"> FH 1.6 Change Order 004 – Variation to Options Appraisal - 20141230
5	Appraisal Methodology	<ul style="list-style-type: none"> UK Treasury Green Book Guidance UK DoH Health Building Notes UK DoH Health Technical Memoranda Clinical Engagement data developed under CO003 by MJ Medical EY Modelling data, provided in final iteration 10.04.15, included in Appendix 9 UK Department of Health Healthcare Premises Cost Guides, 2nd Edition UK Treasury recommended Generic Economic Model (GEM) Strategic Outline Case Refined Concept Addendum prepared by WS Atkins Appendices to Strategic Outline Case Refined Concept Addendum prepared by WS Atkins RICS Code of Measurement: A Guide for Property Professionals BCIS PUBSEC (Tender Price Index of Public Sector Building Non Housing)

STATES OF JERSEY

FUTURE HOSPITAL PROJECT

CHANGE REQUEST NR. 4 – DATA BOOK

		<ul style="list-style-type: none"> • Site valuation data provided by BNP Paribas 23.03.15 and updated site valuation data provided by BNP Paribas 30.04.15 • BCIS published location adjustment for Jersey (not Channel Islands) published 1Q15 • Skills Review of Jersey’s Construction Sector dated September 14 published by Jersey Construction Council • Committee of Inquiry into Building Costs dated September 02 published by the States of Jersey • Gleeds in-house R&D material • Priced Bills of Quantities for elemental analysis for Jersey Contracts • UK Office for National Statistics – Construction statistics median earnings 2013 • UK recent trade advertisements for construction posts • Benefit criteria: ‘Appendix 1 to R Report’ • Risk criteria: ‘Appendix 1 to R Report’ • HM Treasury Green Book Guidance (Optimism Bias) • Mott Macdonald template for calculating Optimism Bias (as amended by Gleeds) • Consultations with stakeholders including: Jersey Fire Service (meeting record 18.02.15) Planning Authority (minutes of planning meetings 23.01.15 and 26.02.15) • Comments of Independent Evaluators attending Benefits and Risk Workshop 26.03.15 • Programme assumptions based on UK healthcare and Jersey specific experience
--	--	---

STATES OF JERSEY

FUTURE HOSPITAL PROJECT

CHANGE REQUEST NR. 4 – DATA BOOK

		<ul style="list-style-type: none"> Data provided in respect of current Bank of Canada build by Dandara for programme and m² delivery per month
6	Option A – Dual Site	Please refer to Appendices 3 – 23 and 29 below
7	Option B - Overdale	Please refer to Appendices 3 – 23 and 29 below
8	Option C – General Hospital	Please refer to Appendices 3 – 23 and 29 below
9	Option D - Waterfront	Please refer to Appendices 3 – 23 and 29 below
10	Conclusions	<ul style="list-style-type: none"> CR004 GEM Summary Options ABCD and Receipts (as revised v2.5 30.04.15) CR004 Benefit & Risk Model GMS V8 – EY 300415

STATES OF JERSEY

FUTURE HOSPITAL PROJECT

CHANGE REQUEST NR. 4 – DATA BOOK

Appendices

Location	Subject	Source materials
Appendix 1	States of Jersey CR004 Brief	<ul style="list-style-type: none"> FH 1.6 Change Order 004 – Variation to Options Appraisal - 20141230
Appendix 2	Verification of previous site deselection	<ul style="list-style-type: none"> Strategic Outline Case prepared by WS Atkins Appendices to Strategic Outline Case prepared by WS Atkins Strategic Outline Case Refined Concept Addendum prepared by WS Atkins Appendices to Strategic Outline Case Refined Concept Addendum prepared by WS Atkins
Appendix 3	Site Boundary 'Red Line Plans'	<p>Red line drawings prepared by Hassell based on:</p> <ul style="list-style-type: none"> Digimap Jersey digital mapping data Ordnance Survey data
Appendix 4	Site Appraisal Plans	<p>Site analysis drawing prepared by Hassell based on:</p> <ul style="list-style-type: none"> Digimap Jersey digital mapping data Primary research of sites <p>Infrastructure site analysis drawings prepared by Arup based on:</p> <ul style="list-style-type: none"> Services and utilities data provided by SOJ 'Main LV Distribution Network' drawing – J250101-E/001 Revision P2 prepared by Henderson Green in respect of electrical schematic at Jersey General Hospital Water supply and mains water layout data provided by Jersey Water
Appendix 5	Local Infrastructure / Transport Plans	<p>Transport assessment drawings prepared by Arup based on:</p> <ul style="list-style-type: none"> Primary review of accessibility Digital mapping data for St Helier

STATES OF JERSEY

FUTURE HOSPITAL PROJECT

CHANGE REQUEST NR. 4 – DATA BOOK

Location	Subject	Source materials
		<p>Technical Note TN-TRA-001/3 prepared by Arup based on:</p> <ul style="list-style-type: none"> • General Hospital Travel Plan prepared by Halcrow, March 2005 • Esplanade Masterplan, States of Jersey, March 2011 • Primary review of accessibility, taking account of the range of transport modes to be accommodated • Traffic Survey
Appendix 6	Civil Engineering Technical Note	<p>Technical Note TN-CIV-001 prepared by Arup and Rothwells based on:</p> <ul style="list-style-type: none"> • Email dated 11.02.15 from Steve Bohea Transport and Technical Services • Drawing 'Jersey General Hospital, Overdale & Field 1551, St Helier' drawn by TTS Records 11/02/2015 • Drawing 'JGH – Existing Site, Gloucester Street & The Parade, St Helier' drawn by TTS Records 11/02/2015 • Drawing 'Jersey General Hospital Waterfront & Jardin de la Mer, St Helier' drawn by TTS Records 11/02/2015 • Option D Waterfront Site 'Proposed Site Plan' prepared by Hassell
Appendix 6	Electrical Technical Note	<p>Technical Note TN-E-001-5 prepared by Arup based on:</p> <ul style="list-style-type: none"> • Lighting Guide 2 (LG2): Hospitals and Healthcare Buildings • Application submitted to Jersey Electric Company 28.01.15 requesting maximum supplies for each site, for all-electric and conventional options • Cost information provided by JEC 13.02.15 • Follow up information provided by JEC 03.03.15

STATES OF JERSEY

FUTURE HOSPITAL PROJECT

CHANGE REQUEST NR. 4 – DATA BOOK

Location	Subject	Source materials
		<ul style="list-style-type: none"> • Application submitted to Jersey Telecom 30.01.15 requesting new communications supplies • Cost information provided by JT 27.02.15
Appendix 6	Geotechnics Technical Note	Technical Note TN-GEO-001 prepared by Arup based on: <ul style="list-style-type: none"> • Ground investigation records for Overdale site • Desk study of Overdale site prepared by Arup October 2014 • Desk study of General Hospital site • Data from February 2014 ground investigation at Waterfront site
Appendix 6	Mechanical Technical Note	Technical Note TN-M-001-5 prepared by Arup based on: <ul style="list-style-type: none"> • Fire Hazard Classification • Medical Gases Health Technical Memorandum 02-01 • BS 9990:2015 Non automatic fire-fighting systems in buildings - Code of practice • Jersey Water site pipework distribution layout for Jersey General Hospital • Jersey Water site pipework distribution layout for Overdale • Costs for incoming mains water supply for all options provided by Jersey Water • Jersey Gas site pipework distribution layout for Jersey General Hospital • Costs for incoming gas supply for all options provided by Jersey Gas • Jersey Gas tariff information provided by email 11.02.15 • Average fuel oil cost per litre (supplied by PDJ Ltd) based on December 2014 price

STATES OF JERSEY

FUTURE HOSPITAL PROJECT

CHANGE REQUEST NR. 4 – DATA BOOK

Location	Subject	Source materials
Appendix 6	MEP Technical Note	<p>Technical Note TN-MEP-001 prepared by Arup based on:</p> <ul style="list-style-type: none"> • Historical plant space information from similar sized healthcare projects • BSRIA Rules of Thumb – Guidelines for Building Services 5th Edition (BG9/2011) • Calculations based on estimated system capacity loads • Manufacturer physical plant and equipment sizes • Plant and equipment space guidance information • Maintenance and access space required as advised by manufacturers
Appendix 6	Structures Technical Note	<p>Technical Note TN-STR-001 prepared by Arup based on:</p> <ul style="list-style-type: none"> • Available geotechnical information for all sites, including Historical ground investigations undertaken at Overdale in 1997 and 2001 Historical ground investigations undertaken at Jersey General Hospital in 1973, 1979 and 2014 Trial pits undertaken as part of drainage construction works at Waterfront site in 2014 • BS 8002: 1994 Code of Practice for earth retaining structures • Health Technical Memorandum 08-01 Acoustic Design Requirements
Appendix 6	Tidal Impact Report	<p>Technical Note TN-TI-001 prepared by Arup based on:</p> <ul style="list-style-type: none"> • Digital Terrain Map provided by States of Jersey • Drawings of coastal wall structures obtained from States of Jersey TTS in 2011

STATES OF JERSEY

FUTURE HOSPITAL PROJECT

CHANGE REQUEST NR. 4 – DATA BOOK

Location	Subject	Source materials
		<ul style="list-style-type: none"> • EurOtop 'Wave overtopping of Sea Defences and Related Structures: Assessment Manual' • Image from BBC Jersey news website showing overtopped discharge down Victoria Avenue, March 2008 • HR Wallingford 'Jersey Coastal Management Study 1991'
Appendix 7	Town Planning Assessment	<p>KE Planning assessment of planning issues based on:</p> <ul style="list-style-type: none"> • Primary research into site options • Discussions with Planning Department 23 January 2015 and 26 February 2015 • St Helier Design Guidance 2013 • Policy SC04 • Jersey Waterfront 2006 Supplementary Planning Guidance • Tall Buildings policy • Revised Island Plan 2011 • Waterfront Masterplan <p>Response from Planning Authority</p>
Appendix 8	Functional Area Estimates	<ul style="list-style-type: none"> • UK DoH Health Building Notes • UK DoH Health Technical Memoranda • Clinical Engagement data developed under CO003 by MJ Medical • UK Department of Health Healthcare Premises Cost Guides, 2nd Edition • Strategic Outline Case Refined Concept Addendum prepared by WS Atkins • Appendices to Strategic Outline Case Refined Concept Addendum prepared by WS Atkins
Appendix 9	States of Jersey Relevant Activity Data	<ul style="list-style-type: none"> • 3nr iterations of modelling data generated by EY, the latest of which issued to MJ Medical 10.04.15

STATES OF JERSEY

FUTURE HOSPITAL PROJECT

CHANGE REQUEST NR. 4 – DATA BOOK

Location	Subject	Source materials
Appendix 10	Health Planning and Stacking Diagrams	<p>Drawings prepared by Hassell based on:</p> <ul style="list-style-type: none"> • Historical information from similar sized healthcare projects • Functional Area Estimate v.18 Dual Site • Functional Area Estimate v.05 Single Site • Strategic Outline Case Refined Concept Addendum prepared by WS Atkins • Appendices to Strategic Outline Case Refined Concept Addendum prepared by WS Atkins • Clinical Engagement data developed under CO003 by MJ Medical • Responses to design commentary provided by SOJ • Feedback from meetings with Planning Authority 23.01.15 and 26.02.15
Appendix 11	Site Massing Proposals	<p>Drawings prepared by Hassell based on:</p> <ul style="list-style-type: none"> • Historical information from similar sized healthcare projects • Functional Area Estimate v.18 Dual Site • Functional Area Estimate v.05 Single Site • Strategic Outline Case Refined Concept Addendum prepared by WS Atkins • Appendices to Strategic Outline Case Refined Concept Addendum prepared by WS Atkins • Clinical Engagement data developed under CO003 by MJ Medical • Responses to design commentary provided by SOJ • Feedback from meetings with Planning Authority 23.01.15 and 26.02.15
Appendix 12	Proposed Site engineering plans	<p>Drawings prepared by Arup based on:</p> <ul style="list-style-type: none"> • Application submitted to Jersey Electric Company 28.01.15 requesting maximum

STATES OF JERSEY

FUTURE HOSPITAL PROJECT

CHANGE REQUEST NR. 4 – DATA BOOK

Location	Subject	Source materials
		<p>supplies for each site, for all-electric and conventional options</p> <ul style="list-style-type: none"> • Cost information provided by JEC 13.02.15 • Follow up information provided by JEC 03.03.15 • Application submitted to Jersey Telecom 30.01.15 requesting new communications supplies • Cost information provided by JT 27.02.15 • Fire Hazard Classification • Medical Gases Health Technical Memorandum 02-01 • BS 9990:2015 Non automatic fire-fighting systems in buildings - Code of practice • Jersey Water site pipework distribution layout for Jersey General Hospital • Jersey Water site pipework distribution layout for Overdale • Jersey Gas site pipework distribution layout for Jersey General Hospital • Historical plant space information from similar sized healthcare projects • BSRIA Rules of Thumb – Guidelines for Building Services 5th Edition (BG9/2011) • Calculations based on estimated system capacity loads • Manufacturer physical plant and equipment sizes • Plant and equipment space guidance information • Maintenance and access space required as advised by manufacturers • Historical drawings and data provided by SOJ

STATES OF JERSEY

FUTURE HOSPITAL PROJECT

CHANGE REQUEST NR. 4 – DATA BOOK

Location	Subject	Source materials
Appendix 13	Proposed Construction Programmes	<p>Construction programmes prepared by Gleeds Management Services based on:</p> <ul style="list-style-type: none"> • Programme assumptions based on UK healthcare and Jersey specific experience • Data provided in respect of current Bank of Canada build by Dandara for programme and m² delivery per month • Data provided in respect of Welsh healthcare projects: Specialist Critical Care Centre, Cwmbran and Ysbyty Ystrad Fawr • Data provided by Sir Robert McAlpine in respect of on-island experience on Jersey for programme and m² delivery per month
Appendix 14	Proposed Construction Phasing	<p>Drawings prepared by Hassell based on:</p> <ul style="list-style-type: none"> • Massing and stacking drawings • Responses to design commentary provided by SOJ • Phasing assumptions based on UK healthcare specific experience • Gleeds Management Services' programmes for Options A, B, C and D dated 16.04.15
Appendix 15	Capital cost pricing	<ul style="list-style-type: none"> • Strategic Outline Case prepared by WS Atkins • Appendices to Strategic Outline Case prepared by WS Atkins • Strategic Outline Case Refined Concept Addendum prepared by WS Atkins • Appendices to Strategic Outline Case Refined Concept Addendum prepared by WS Atkins • UK Department of Health Healthcare Premises Cost Guides, 2nd Edition • RICS Code of Measurement: A Guide for Property Professionals

STATES OF JERSEY

FUTURE HOSPITAL PROJECT

CHANGE REQUEST NR. 4 – DATA BOOK

Location	Subject	Source materials
		<ul style="list-style-type: none"> • BCIS PUBSEC (Tender Price Index of Public Sector Building Non Housing) • BCIS Building Height Index • BREEAM 2008 guidance • BRE report titled 'Delivering Sustainable Buildings – Savings and Payback' published 2014 for Community Health Buildings • HM Treasury Green Book Guidance (Optimism Bias)
Appendix 16	Inflation Methodology	<ul style="list-style-type: none"> • BCIS All-in Tender Price Index All-in TPI • BCIS PUBSEC (Tender Price Index of Public Sector Building Non Housing) • BCIS General Building Cost Index (GBCI) • MIPS index (median index pricing study) • UK Consumer Price Index (CPI) • UK Retail Price Index (RPI) • UK Retail Price Index Jevons (RPIJ) • UK Department of Health Healthcare Premises Cost Guides, 2nd Edition
Appendix 17	Location Factor estimate	<ul style="list-style-type: none"> • BCIS published location adjustment for Jersey (not Channel Islands) published 1Q15 • Skills Review of Jersey's Construction Sector dated September 14 published by Jersey Construction Council • Committee of Inquiry into Building Costs dated September 02 published by the States of Jersey • Gleeds in-house R&D material • Priced Bills of Quantities for elemental analysis for Jersey Contracts • UK Office for National Statistics – Construction statistics median earnings 2013

STATES OF JERSEY

FUTURE HOSPITAL PROJECT

CHANGE REQUEST NR. 4 – DATA BOOK

Location	Subject	Source materials
		<ul style="list-style-type: none"> UK recent trade advertisements for construction posts UK Department of Health Healthcare Premises Cost Guides, 2nd Edition
Appendix 18	Optimism Bias methodology and outcomes	<ul style="list-style-type: none"> HM Treasury Green Book Guidance (Optimism Bias) Mott Macdonald template for calculating Optimism Bias (as amended by Gleeds) Consultations with stakeholders including: Jersey Fire Service (meeting record 18.02.15) Planning Authority (minutes of planning meetings 23.01.15 and 26.02.15) Comments of Independent Evaluators attending Benefits and Risk Workshop 26.03.15
Appendix 19	Investment Summary	<ul style="list-style-type: none"> CR004 GEM Summary Options ABCD and Receipts (version 2.5 dated 30.04.15)
Appendix 20	Site Valuations	<ul style="list-style-type: none"> BNP Paribas valuation information provided 23.03.15 Updated BNP Paribas valuation information provided 30.04.15
Appendix 21	Site Reuse proposals	<p>Drawings prepared by Hassell based on:</p> <ul style="list-style-type: none"> Assessment of site release of Overdale and General Hospital sites
Appendix 22	Benefits and Risk Analysis	<ul style="list-style-type: none"> Benefit criteria: 'Appendix 1 to R Report' Risk criteria: 'Appendix 1 to R Report' CR004 Benefit & Risk Model GMS V8 – EY 300415
Appendix 23	Residual Risk Registers	<ul style="list-style-type: none"> Technical Advisor assessment of residual option risks
Appendix 24	EY Assurance Outcomes	<ul style="list-style-type: none"> EY Assurance Log v.3 EY interim report on Site Options Appraisal Implementation 10.04.15

STATES OF JERSEY

FUTURE HOSPITAL PROJECT

CHANGE REQUEST NR. 4 – DATA BOOK

Location	Subject	Source materials
Appendix 25	Design Champion report	<ul style="list-style-type: none"> Assurance letter received 24.04.15
Appendix 26	HSSD Consultation	<ul style="list-style-type: none"> Assurance letter and details of Clinical Engagement consultees, received 24.04.15
Appendix 27	Other assurances	
Appendix 28	Databook	<ul style="list-style-type: none"> Site Option Report and Appendices prepared by Technical Advisor
Appendix 29	Schedule of Enquiries	<p>Correspondence, meeting records and data sourced from:</p> <ul style="list-style-type: none"> The Parish of St Helier Jersey Water Jersey Electricity Company Jersey Gas JT global (ICT provider) States of Jersey Building Services Transport and Technical Services Department (Transport and Drainage Authority) Planning and Environment Department (Planning Authority and Environment Regulator) Jersey Fire and Rescue Services Jersey Ambulance Service Jersey Development Company
Appendix 30	Development log	<ul style="list-style-type: none"> Technical Advisor responses to SOJ comments on Site Option Report Technical Advisor responses to SOJ comments on programme Technical Advisor responses to SOJ comments on design and engineering Technical Advisor responses to planning comments Technical Advisor responses to SOJ comments on costs

STATES OF JERSEY

FUTURE HOSPITAL PROJECT

CHANGE REQUEST NR. 4 – DATA BOOK

Location	Subject	Source materials
Appendix 31	Future Flexibility	<ul style="list-style-type: none">Based on Appendices 10 and 11
Appendix 32	Discounted variants	<ul style="list-style-type: none">Material prepared by Hassell