Jersey Future Hospital Project

Outline Business Case

Appendix 1 - OBC Assumptions Log

CLIENT:
THE STATES OF JERSEY

PROJECT NUMBER:
FUTURE HOSPITAL PROJECT

ISSUING COMPANY:
GLEEDS ADVISORY

Document Control

Version	Date Issued	Summary of Changes	Author
V1	27.9.17	Document compilation	N Aubrey
V2	11.10.17	Appendix content updated	T Nicholls
V3	24.10.17	Template updated	T Nicholls

Outline Business Case
Economic Assumptions

Ref:	General Assumptions	Notes
1	All costs to be calculated to included inflation. GEM model to strip out underlying inflation at 3% local rate and leave only differential inflation	
4	data Source - Inpatients episodes	
5	1) 'JFH-SOJ-M0-XX-HI-K-0006'	
6	data Source -Theatre cases and sessions	
7	1)'JFH-SOJ-M0-XX-HI-K-0006'	
8	2)'JFH-SOJ-ZZ-XX-HI-K-0073'	
9	data Source -Outpatient appointments	
10	1) 'JFH-SOJ-ZZ-XX-HI-K-0069_outpatients_2016'	
11	The outpatients waiting list as at 1st December 2016 has been added to the 2016 demand as it is assumed that all of these patients were added to the waiting list within 2016. It is assumed all patients on this waiting list are new referrals and the specialty level new: follow up ratio has been applied to generate the follow up demand for these patients.	
12	The inpatients waiting list as at 1st December 2016 has been added to the 2016 demand and again it has been assumed that all of these patients have been added to the waiting list in 2016. It is assumed that this waiting list consists of elective and day case patients, with the split determined based on 2015 proportion between elective and day case episodes for each specialty. A specialty level average length of stay has been applied to these patients to determine the bed day requirement.	
13	The theatres data has been linked to the inpatients episodes data by the URN and date. Hence the inpatient data has been used to determine the point of delivery and specialty for the theatre requirements as well as the bed requirements	
14	Ward attenders have been excluded from the analysis	
15	The minor operations and procedures have been included in the outpatient attendances	
17	For inpatient episodes, ED attendances and theatre cases, the period January 2015 – December 2015 was used as a baseline. Growth rates based on the January 2016 – December 2016 data was applied to derive the 2016 activity. January 2016 – December 2016 data was used as the baseline for outpatient appointments.	
18	All population estimates were obtained from the report 'Jersey population projections 2016 release ' produced by the States of Jersey Statistics Unit. The derived demographic growth rates (please see the appendix for the rates used) obtained from this report were then applied based on the following age groups: 0-4, 5-17, 18-64, 65-79, 80+.	
19	The net 700+ inward migration scenario has been used to determine growth rates for all analyses and the same demographic growth rates were used for both public and private patients. Population forecasts can be viewed in appendix 7	

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20	For both outpatients and inpatients demand, out of hospital services have been excluded. However activity at Overdale has been included within the demand numbers.	
21	As some of the wards may not be in use for 7 days a week, the following assumptions for days in year were used to convert bed days into a bed requirement (please note this does not include the impact of interventions to move to 7 day working)	

22	Point of delivery	Days in year
23	Elective inpatients	365 (7 days a week)
24	Non elective inpatients	365 (7 days a week)
25	Day cases	260 (5 days a week)
26	Regular attenders (exc	260 (5 days a week)
27	Renal regular attenders	286 (5.5 days a week)

28	The following occupancy rates were also used to determine bed and regular attender	

29	Bed type	Occupancy rate
30	Male	80%
31	Female	80%
32	Maternity	65%
33	Paediatric	65%
34	Critical care	65%
35	Regular attender	33% (assumed 8 hour
36	Day cases	33% (assumed 8 hour days)

37	The following theatre utilisation rates (calculated from the theatre data sets) were applied to	

38	Point of delivery	Theatre utilisation
39	Elective	91%
40	Day Cases	74%
41	Non Elective	61%
42	Maternity	70%

43	The high utilisation rates for elective theatres are a function of low throughput and short session lengths.	
44	To convert outpatient appointments into clinics, an average appointments per clinic assumption was applied at a specialty level.	
45	A booking utilisation of 90% was used for all outpatient clinics to allow for a buffer for cancellations and unbooked appointments	
46	**ES01 - Relocation of Catering Unit.**The Project Cost Estimate will include the Initial Set up Fees (agents costs etc.) and Lease Costs during the refurbishment of the unit; the Capital Costs to refurbish the unit and Equipment Costs to fit out the Kitchens, Storage areas and Offices.	
47	**ES03 & ES08 – Ground and First Floor Modifications**The Project Cost Estimate will include the Fees and Capital Refurbishment costs for the revised areas, an allowance for any Equipment that cannot be transferred, and the cost of decanting the departments into the new working areas. Once the area is handed over (estimated end of 2018) all the ongoing revenue implications of operation of the unit will be included within the HSSD budget and not borne by the project.	

	ES04 – Temporary Clinic Building - The Project Cost Estimate will include the Fees and Capital Refurbishment costs for the revised areas, an allowance for any Equipment that cannot be transferred, and the cost of decanting the departments into the new working areas.Once the area is handed over (estimated end of 2018) all the ongoing revenue implications of operation of the unit will be included within the HSSD budget and not borne by the project.	
	ES05 – Medical Records Relocation - The Project Cost Estimate will include the Fees and Capital Refurbishment costs for the revised areas, an allowance for any Equipment that cannot be transferred, and the cost of decanting the departments into the new working areas.Once the area is handed over (estimated end of 2018) all the ongoing revenue implications of operation of the unit will be included within the HSSD budget and not borne by the project.	
	ES06 – Corporate and Training Office Relocation - the Project Cost Estimate will include the Initial Set up Fees (agent's costs etc.) and Lease Costs during the refurbishment of the unit, the Capital Costs to refurbish the areas, an allowance for any Equipment that cannot be transferred, and the cost of decanting the departments into the new working areas. Additionally the Lease Costs will be borne by the project until the Granite Block refurbishment is concluded (estimated end 2025). Once the area is handed over (estimated end of 2018) all the other ongoing revenue implications of operation of the unit will be included within the HSSD budget and not borne by the project.	
	ES07 - Westaway Court Redevelopment - The Project Cost Estimate will include the Capital Costs to demolish and rebuild Westaway Court, including new Equipment, and the cost of decanting the departments into the new working areas.Once the area is handed over (estimated mid of 2019) all the ongoing revenue implications of operation of the unit will be included within the HSSD budget and not borne by the project.	
	ES08 - Provision of Key Worker Housing - The Project Cost Estimate will include the Capital Costs to refurbish the Limes to provide temporary accommodation until permanent available. Once the area is handed over (estimated late of 2017) all the ongoing revenue implications of operation of the unit will be included within the HSSD budget and not borne by the project. Other facilities provided by Andium homes for further provision of Key Worker Housing will have their costs borne by HSSD.	
	P**atriotic Street Carpark:** - The cost of the additional two half decks of parking delivered on Patriotic Street Carpark and the bridge links to the hospital will be included in the project capital costs.The additional vertical circulation, internal refurbishment, external refurbishment, and internal layout changes will be carried out from the DFI Parking Car Park Trading Account and will not be borne by the project.	
	Hydrotherapy Pool: - Within Option 3 and Option 4, it is assumed that the Hydrotherapy Pool will not be replaced and will instead in the interim and permanent case be provided via rental of existing pools on Jersey. Therefore, no costs are included in the project capital costs and all costs are assumed to be borne from the HSSD budget.It would be possible to consider a capital cost replacement as a sensitivity to the business case.	

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	EPR and other Transformation or Out Of Hospital Work stream Costs: - It is possible to consider some EPR and potentially other out Transformation or Out of Hospital Work Stream Costs as capital costs. In this instance, all are excluded from the project capital costs and are subject to separate funding.	

Assumptions for States of Jersey financial model – v159

Draft for discussion

September 2017

Building a better working world

Assumptions

General assumptions regarding inputs:

- Where a single input (population, activity data, staff projections) has been provided for a decade block the model assumes that the growth is linear across the time block
- General overheads and Overheads for Estates and facilities and community are assumed to be split across Hospital, Community and Public Health based on share of total spend
- Insurance overheads are included in general overheads and are split across all specialties
- Estates facilities and community costs are apportioned across all specialties excluding Ambulance and UK contracts
- Reallocation inputs have been sourced from the Acute Services model. This reallocation converts the full list of medical specialties in to reporting specialties with the results summarised in the model outputs
- The Acute Services model reallocations have been updated so that costs apportioned to C&SS and Corporate reporting specialties have had their share of the costs reapportioned across all the reporting specialties based on the specialties share of the costs
- All costs in the 2016 general ledger have been mapped to expenditure categories from the acute services model, and a forecasting treatment applied based on the cost category
- Opening 2016 balance sheet is assumed to be the 2015 balance sheet as the 2016 annual accounts are not yet available

Assumptions

General assumptions regarding inputs:

- The below is a summarised reconciliation of the manual manipulation which has been made to the general ledger and overhead inputs. The reconciliation summarises costs which have been both included and excluded:

	Ledger	Overheads	Total
Hospital ledger	**102,926,985.51**	**19,932,882.69**	**122,859,868.20**
Corporate and other overheads added back		9,588,944.68	9,588,944.68
Hard and soft FM for GEM feed excluded	-5,702,268.14	-6,751,486.02	-12,453,754.16
KKG Other estates and equip maintenance excluded		1,680.11	1,680.11
Community portering excluded		-242,615.22	-242,615.22
Community and other hard and soft FM excluded	-734,083.57	-2,041,427.42	-2,775,510.99
Energy and utilities cost excluded	-457.32	-167,365.72	-167,823.04
KPH700 WP Recruitment excluded		-29,875.28	-29,875.28
KFT800 WP info dev excluded		-145,547.28	-145,547.28
KDP100 Primary Care excluded		-406.22	-406.22
KDP 200 Sustainable Primary Care excluded		-206,099.69	-206,099.69
KCB 200 WP Communications excluded		-47,940.54	-47,940.54
KDA100 Systems redesign and deliveries excluded		-395,572.23	-395,572.23
Capital and depreciation expenditure excluded	-1,920,302.64	-340,392.72	-2,260,695.36
GAAP adjustments and other miscellaneous items excluded	79,703.93		79,703.93
Removal of KNS140 - Community contraception clinic	-9,463.03		-9,463.03
Community share of overheads		-4,334,188.75	-4,334,188.75
Total costs in model outputs for 2016	**94,640,114.74**	**14,820,590.39**	**109,460,705.13**

Assumptions

General assumptions regarding forecasts:

- Income is assumed to grow in line with green book inflation and the demographic growth rate, these are primarily related to private patient income
- Other non staff fixed is assumed to grow in line with green book inflation, these are primarily related to insurance
- Other non staff semi fixed is assumed to grow in line with green book inflation and demographic growth rates, there are primarily travel costs of staff
- Purchase of healthcare is assumed to grow in line with green book inflation and demographic growth rates, this is primarily the purchase of NHS healthcare for offshored patients
- Other staff pay is assumed to grow in line with pay inflation, these costs are primarily G&A staff cost of running the hospital and is not affected by patient volumes
- Other non staff variable costs concerning non clinical patient costs are assumed to grow in line with green book inflation and demographic growth rates
- Other non staff variable costs concerning G&A costs are assumed to grow in line with green book inflation
- High value medical supplies costs have been carved out in to a cost category called theatre non pay and are assumed to grow in line with green book inflation and growth in activity rates
- All FTE costs are assumed to grow with pay rate inflation and capture the net impact of the FTE movement calculated in the C&D model
- Year on year FTE movement by specialty and grade post interventions assumes that the baseline FTE for 2017 is the same as 2016
- For activity dependent costs such as the cost of drugs or medical supplies the model assumes that each specialty only has one type of activity (ED attendances, outpatient attendances, theatre cases or inpatient data). The forecast activity from the C&D model is then used to forecast activity. For specialties without an activity, costs are grown in line with inflation and demographic growth rates
- Overheads are split across specialty in line with 2016 overheads specialty split

Assumptions

General assumptions regarding financial statements and model outputs:

- Closing working capital balance sheet items are assumed to be the historical average percentage of an appropriate measure:
    - Trade receivables as a historical average of income;
    - Inventory as a historical average of purchases; and
    - Trade payables as a historical average of expenses.
- Existing fixed assets are unwound using the weighted average useful economic life of the existing fixed assets
- Capex to move in date is assumed to be the capex used in the treasury submissions, is depreciated over eight years and is written off in the year of the move
- Capex post move in date has three categories with different useful economic lives, additions at move in date is an input and future capex is equal to PY depreciation as assets are assumed to be replaced at the rate they are used
- The balance sheet information is currently a work in progress pending clarity of assumptions to be provided by the States of Jersey and Gleeds, this will potentially be updated at a later project stage
- KPIs are calculated using the reallocation inputs from the Acute services model, and inpatient costs are assumed to be all other costs which are not theatre cases or outpatient attendances