

## **Velindre Radiotherapy Satellite Centre Project**

### **Site Selection Evaluation Report**

Version 1.0

Date 23<sup>rd</sup> June 2017

Status: Final

## 1. Purpose of Report

- 1.1 Following a rigorous evaluation process this document has been prepared with the purpose of presenting the results obtained in assessing the Health Board proposals to host the Radiotherapy Satellite Centre (RSC). At the heart of this process is the need to ensure that the evaluation process is carried out in a robust, fair and transparent manner. As such it has been undertaken in line with the evaluation methodology set out in the document *Radiotherapy Satellite Site Evaluation Guidance Document (appendix 1)*.

## 2. Background

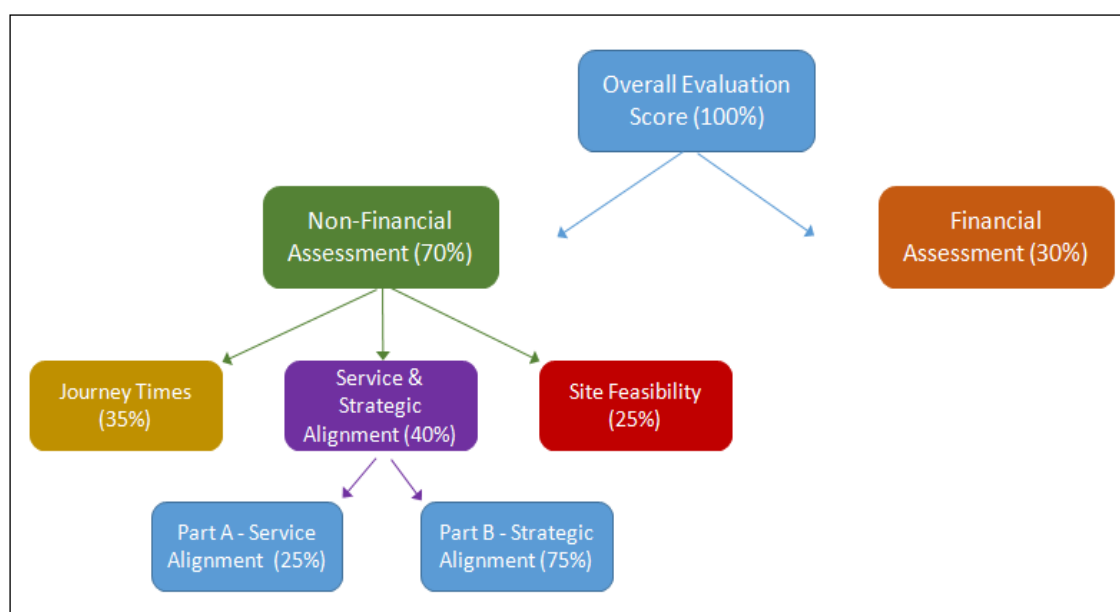
- 2.1 In determining the preferred location of the Velindre RSC the Trust asked all Health Boards in South East Wales for expressions of interest in hosting the RSC. This resulted in two University Health Boards, Aneurin Bevan and Cwm Taf, expressing an interest and subsequently offering up a range of possible locations on the Nevill Hall Hospital and Prince Charles Hospital sites respectively. Following an estate based assessment, two potential sites for each Health Board were identified and subjected to more detailed scrutiny, the results of which are presented in this report.
- 2.2 To assist the Trust in undertaking the evaluation, support has been provided from a range of specialist sources with the overall process being overseen by Capita Business Services Ltd who have been appointed by the Trust to provide Health Care Planning advice for the RSC Project.
- 2.3 The approach, criteria and weightings within the evaluation methodology were developed by Velindre in partnership with each Health Board through the establishment of joint planning groups. There has been positive engagement between Velindre and the Health Boards throughout the process. The methodology was approved by the Velindre Trust Board in April 2017; and it was agreed at the Joint Planning Group with Aneurin Bevan and Cwm Taf UHBs on 26<sup>th</sup> April and 20<sup>th</sup> April respectively.
- 2.4 This process will culminate in a recommendation on the preferred site location to host the Radiotherapy Satellite Centre being considered by Velindre NHS Trust Board at its meeting on the 13<sup>th</sup> July 2017.

## 3. Assessment Process - Overview

- 3.1 As set out in the guidance document, the site evaluation process includes both a non-financial and a financial appraisal.

- 3.2 The **non-financial appraisal** is focused on three distinct areas which, for each site, seeks to evaluate the following:
- a) The impact on patient journey times for the South East Wales catchment population;
  - b) The ability to meet the service requirements for the RSC as well as support the strategic ambition of Velindre to deliver world class radiotherapy services for South East Wales; and
  - c) The feasibility of successfully delivering the Project from an estates and infrastructure perspective.
- 3.3 The **financial appraisal** covers the forecast capital costs of developing the new facility on each of the identified sites.
- 3.4 Weightings have been attached to each of the above components to derive an overall score for each site as set out in the figure 1 below.

**Figure 1 – Site evaluation scoring methodology**



- 3.5 Subsequent sections of the document present the results of the non-financial and financial evaluations and a summary describing how this comes together in informing the final recommendation in relation to the preferred location for the RSC.

## 4. Non-Financial Evaluation (70% of overall evaluation score)

- 4.0.1 As indicated above the non-financial evaluation is split into three component parts and further detail is provided below.

## 4.1 Patient Journey Times (35% of non-financial score)

### Background:

4.1.1 This part of the evaluation assesses the impact that the chosen site location will have on journey times for patients accessing the RSC at either location and measures the overall travel time savings when comparing:

- The baseline position as expressed by the total travel time for patients accessing radiotherapy at the Velindre Cancer Centre (VCC) against;
- Total future travel time saving for the following configurations:
  - New VCC + Prince Charles Hospital, Merthyr Tydfil; and
  - New VCC + Nevill Hall Hospital, Abergavenny.

*Note: In undertaking this analysis the Trust has been supported by the NHS Wales Informatics Service (NWIS).*

4.1.2 To assess the impact on journey times, analysis has been undertaken using radiotherapy patient attendance data from the 2014/15 Velindre Cancer Centre dataset. The analysis considers only the patient cohort that will be treated at the RSC from the day of opening: breast and prostate tumour types and patients receiving palliative radiotherapy treatment.

4.1.3 In undertaking the assessment, due consideration has been given to the available capacity of the RSC at the time of opening. This takes into account the number of linear accelerators, the hours of operation, anticipated utilisation and average patient treatment times.

4.1.4 Discussion with both Health Boards and Velindre's appointed Health Care Planner considered the advantages and limitations of alternative approaches to measuring and evaluating the patient benefit of reduced travel time for radiotherapy. Alternative options were discounted due to the lack of robust data available to run the proposed scenarios. The decision to use historic attendance data (2014-15) and a specific scenario reflecting the RSC's proposed operating model as of 2021 arose from this discussion and was agreed by the Health Boards and by Velindre Trust Board as part of the overall evaluation methodology.

### Scoring Approach:

4.1.5 The total travel time saving has been assessed for each of the sites and compared. Subsequently the highest time saving has received 100 points with all other site travel time savings scored proportionately to the highest time saving using the formula below:

Highest travel time saving (a)

\_\_\_\_\_ X 100 = Proportionate travel time saving points score

Lower travel time saving (b)

- 4.1.6 The travel time saving points score has then been converted into a weighted score out of 35%.

**Results:**

- 4.1.7 The results of the analysis are presented in the table below.

**Figure 2 – Travel times analysis results**

Travel time measurement		Location	
		Prince Charles Hospital	Nevill Hall Hospital
1	Total beneficial travel times (minutes)	297,882	305,340
2	Total travel time (minutes) for patients that are closer to Velindre Cancer Centre than the proposed Radiotherapy Satellite Centre	1,116,796	1,094,445
3	Total travel time (minutes) for patients that must continue to be treated at Velindre Cancer Centre (i.e. due to type of treatment / tumour site)	1,154,819	1,154,819
4	Total travel time (minutes) for the combination of Velindre Cancer Centre and the proposed Radiotherapy Satellite Centre (1 plus 2 plus 3)	2,569,497	2,554,604
5	Total travel time (minutes) for current radiotherapy service model (all attendances treated at VCC)	2,732,052	2,732,052
6	Total travel time (minutes) saving (5 minus 4)	162,555	177,448
Proportionate points score		91.61	100.00
Evaluation score (proportionate points score X 35%)		32.06	35.00

## 4.2 Service and Strategic Alignment (40% of non-financial score)

**Background:**

- 4.2.1 This part of the evaluation process seeks to assess the extent to which services provided are able to support the requirements to deliver effective radiotherapy services on a satellite basis as well as the Health Boards ability to support the Trust in delivering its strategic ambition to deliver world class radiotherapy services for the population of South East Wales. This is based upon the Health Boards' forecasted position as at 2021/22. Split into two components this part of the evaluation considered:

- **Part A – Service Alignment** - the ability to provide a range of clinical and non-clinical services to support the delivery of high quality radiotherapy services;
- **Part B – Strategic Alignment** - alignment with the Trust's strategic vision to deliver world class radiotherapy services for the catchment population.

**Part A – Service Alignment (25% of service and strategic alignment score):**

4.2.2 To support this part of the evaluation the Trust developed a service specification which identifies and describes the range of clinical and non-clinical support services required from the host Health Board to support the delivery of radiotherapy treatment at the RSC.

4.2.3 In response to the service specification the Health Boards were asked to complete and submit an information pack outlining how they propose to meet the requirements set out in the specification.

**Part B – Strategic Alignment (75% of service and strategic alignment score)**

4.2.4 This part of the evaluation provided an opportunity for each Health Board to outline how the RSC will further its strategies and plans to improve the outcomes for the population that will be treated in the RSC. This part of the evaluation has been assessed against the Health Boards' written response to the following question:

**Strategic Alignment Question:**

Please set out your vision for how locating the Radiotherapy Satellite Centre in your Health Board will support the development of high quality radiotherapy services for the population of South East Wales?

**Key points to be covered in the response:**

- Describe your future vision for the delivery of cancer services?
- Describe how hosting the radiotherapy satellite centre fits in with your future vision and strategies?
- Describe how the radiotherapy satellite centre will support national / regional improvement in cancer outcomes?
- Describe how you can support Velindre to achieve the vision set out in the Radiotherapy Strategy?
- Describe how you will ensure a collaborative and effective working relationship with Velindre in the development and operation of the Radiotherapy Satellite Centre?
- Describe how you can support the delivery of high quality research at the Radiotherapy Satellite Centre?



4.2.5 The overall assessment of Part B reflected both the written submission provided by each Health Board as well as a presentation and panel discussion. The panel comprised relevant leads from Velindre NHS Trust supported by leads from the Community Health Council, Wales Cancer Network and non-NHS Wales clinical oncologists.

### **Scoring Approach:**

4.2.6 Upon the conclusion of parts A and B the Health Board responses were assessed by the panel using the following scoring criteria:

**Figure 3 – Service and Strategic alignment scoring criteria**

Assessment	Score	Interpretation
Excellent	5	Exceptional demonstration by the respondent of the relevant ability, understanding, experience, skills, resource and quality measures required to provide the services with significant additional benefits. Response identifies factors that will offer potential added value, with evidence to support the response.
Good	4	Satisfies the requirement with minor additional benefits. Above average demonstration by the respondent of the relevant ability, understanding, experience, skills, resource and quality measures required to provide the services. Response identifies factors that will offer potential added value, with evidence to support the response.
Acceptable	3	Satisfies the requirement. Demonstration by the respondent of the relevant ability, understanding, experience, skills, resources and quality measures required to provide the services, with evidence to support the response.
Minor reservations	2	Satisfies the requirement with minor reservations. Some minor reservations of the respondent's relevant ability, understanding, experience, skills, resources and quality measures required to provide the services, with little or no evidence to support the response.
Serious reservations	1	Satisfies the requirement with major reservations. Considerable reservations of the respondent's relevant ability, understanding, experience, skills, resources and quality measures required to provide the services, with little or no evidence to support the response.
Unacceptable	0	Does not meet the requirement. Does not comply and/or insufficient information provided to demonstrate that the respondent has the ability, understanding, experience, skills, resource and quality measures required to provide the services, with little or no evidence to support the response.

4.2.7 The service and strategic alignment points score has then been converted into a weighted score out of 25% and 75% respectively. This is subsequently aggregated and expressed as a weighted score out of 40%.

**Results:**

4.2.8 The results of the analysis are presented in the table below.

**Figure 4 – Service and strategic alignment results**

Service and strategic alignment measurement		Health Board	
		Cwm Taf	Aneurin Bevan
1	Service alignment score	4	3
2	Proportionate points score (1 as % of maximum available score)	0.8	0.6
3	Service alignment score (25% available score)	20	15
4	Strategic alignment score	4	4
5	Proportionate points score (4 as % of maximum available score)	0.8	0.8
6	Strategic alignment score (75% available score)	60	60
Proportionate points score (3 plus 6)		80	75
Evaluation score (proportionate points score X 40%)		32	30

### 4.3 Site Feasibility (25% of non-financial score)

**Background:**

- 4.3.1 This part of the assessment aims to evaluate the feasibility of each site, in terms of Project delivery, from an estates and infrastructure perspective. In doing so it considers all shortlisted options on each of the two site options (4 in total) put forwards by each Health Board.
- 4.3.2 This part of the analysis has been led by the Trust's technical advisers (Mott MacDonald) and includes further on-site investigations and research. The site feasibility is based upon the proposed hospital solution and proposed hospital site configuration in 2021/22.
- 4.3.3 As part of this analysis Mott MacDonald has worked closely with Health Board staff and planning authorities. In undertaking this work a number of factors have been reviewed and these are highlighted below.
- Car parking – the extent to which dedicated and accessible patient parking will be available?



- Spatial quality – does the location provide an outlook to the natural environment or green space?
- Site area – does the site offer potential for future expansion?
- Planning risk – are there any potential barriers to obtaining planning consent?
- Accessibility – is there appropriate access to public transport?
- Construction impact – will there be an adverse impact on current infrastructure and / or clinical service provision?
- Access to utilities – does the site allow for sufficient power and energy supply?
- Timing – are there any barriers which would mean construction could not be completed by the end of 2021?

4.3.4 This part of the non-financial assessment comprises 25% of the overall non-financial score.

#### **Scoring Approach:**

- 4.3.5 In approaching the scoring every effort has been made to separate the technical evaluation from the cost impact, which is captured as part of the financial element of the evaluation. Where an impact of the relevant factor is likely to be captured in the cost plan this has not been scored as part of the site feasibility assessment.
- 4.3.6 The factors identified above have been weighted (on a scale of 1 to 5) to reflect their relative importance in the overall assessment. For each factor a number of questions were considered and the responses scored out of 10. These were then aggregated to provide a total points score for each site.
- 4.3.7 The site feasibility score has then been converted into a weighted score out of 25%.

#### **Results:**

- 4.3.8 The results of the analysis are presented in the table overleaf.

**Figure 5 – Site feasibility results**

Site feasibility factor		Health Board / Hospital Site			
		Cwm Taf Prince Charles		Aneurin Bevan Nevill Hall	
		Site 2	Site 3	Site 6	Site 8
1	Car parking	45	45	35	45.
2	Spatial quality	18	21	15	30
3	Site area	15	30	22	15
4	Planning risk profile	50	50	25	25
5	Accessibility at completion	28	20	36	32
6	Disruption during construction	22.5	18.75	18.75	22.5
7	Availability of utilities (Note 1)	0	0	0	0
8	Timing	20	20	30	40
Total score		198.5	204.75	182.25	209.5
Proportionate points score		73.52	75.83	67.5	77.59
Evaluation score (proportionate points score X 25%)		18.38	18.96	16.88	19.4

Note 1 - The impact is reflected in the cost plan and therefore not scored here

- 4.3.9 The results and supporting scoring rationale were shared with the relevant Health Board via engagement between Velindre (supported by their Technical Advisors) and the estates and planning leads of the Health Board. Following these meetings, held during May 2017, both Health Boards confirmed they were in agreement with the scoring and supporting rationale for each of their sites.

## 5 Financial Evaluation (30% of overall evaluation score)

### Background:

- 5.1 The Trust, supported by Mott MacDonald, has used a standard methodology to derive the estimated total construction cost to establish the RSC on each of the shortlisted sites. This is in line with the latest capital costing guidance and advice received from the NHS Wales Shared Services Partnership and comprises the following elements:
- Works cost based on the schedule of accommodation (SoA) applied to standard cost allowances;

- Additional items including fees, non-works costs and equipment, and
- An assessment of the impact of risk.

**Scoring Approach:**

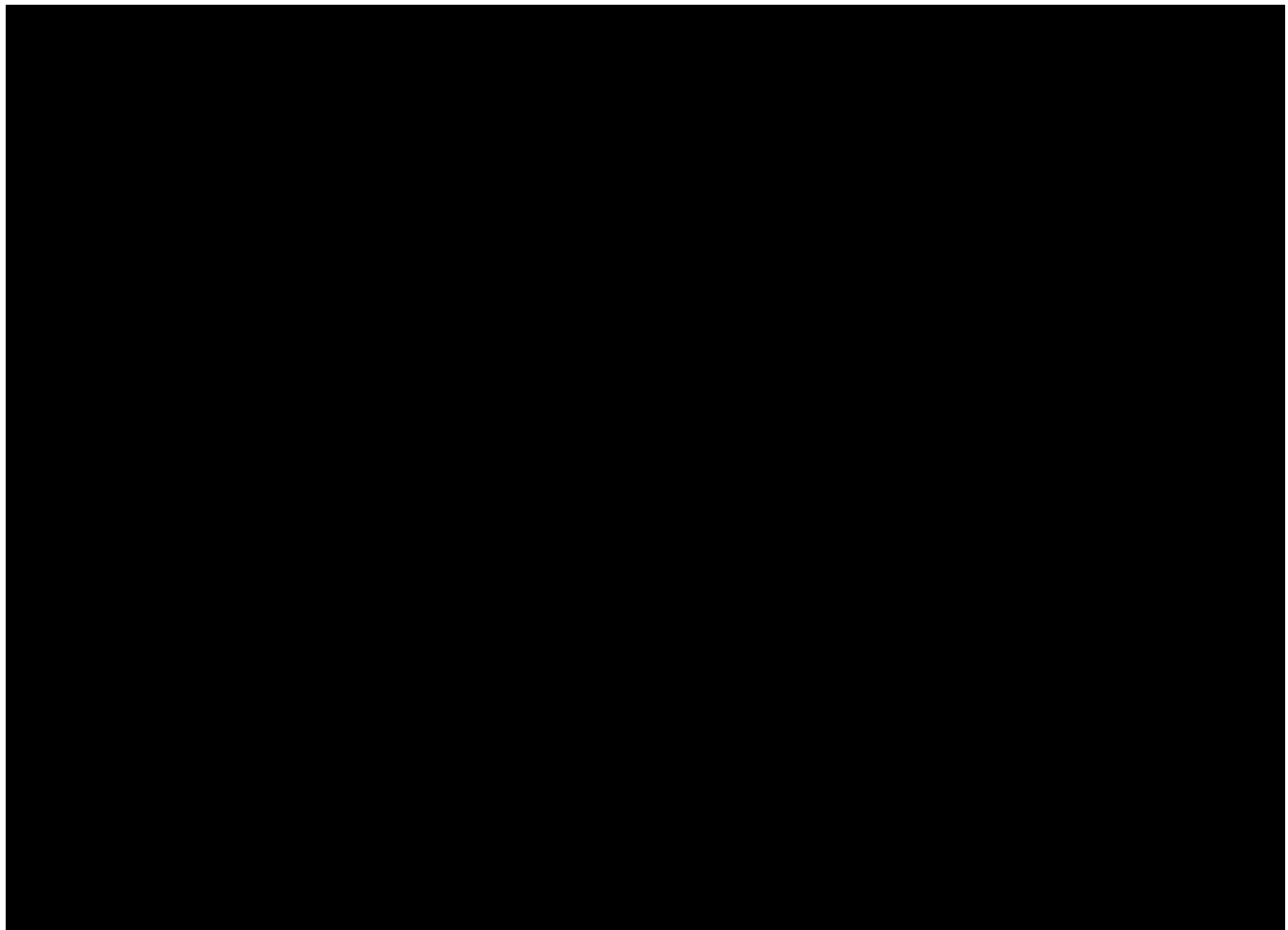
- 5.2 The total forecast capital cost for each site has been calculated and the lowest cost allocated 100 points. All other site capital costs have been scored proportionately to the lowest cost using the formula below:

$$\frac{\text{Lowest cost (a)}}{\text{Higher cost (b)}} \times 100 = \text{Proportionate cost points score}$$

- 5.3 The cost points score have been converted into a weighted score out of 30%.

**Results:**

- 5.4 The results of the analysis are presented in the table below.



- 5.5 Through site feasibility meetings, involving Health Board Estates and Planning leads, each board was provided with the outputs from their own financial evaluation. During this engagement Velindre's appointed Cost Advisor shared

the supporting Cost Forms, (prepared in line with the standard Business Case guidance and format) with much of the subsequent analysis focusing on the site specific abnormal costs. Minor changes were agreed and both Health Boards subsequently confirmed that the outputs of the analysis were in line with established practices in developing capital cost requirements and the agreed evaluation method.

## 6 Evaluation Summary

- 6.1 Taking together the results of the non-financial and financial aspects of the evaluation provides a total assessed score for each of the site options which is set out in the table below.
- 6.2 Where elements of the evaluation are not specific to the sites (e.g. travel time analysis, service and strategic alignment) the scores apply equally.

**Figure 7 – Summary evaluation results**

Evaluation element	Overall Score	Health Board / Hospital Site			
		Cwm Taf Prince Charles		Aneurin Bevan Nevill Hall	
		Site 2	Site 3	Site 6	Site 8
Travel times	35%	32.06	32.06	35.00	35.00
Service and strategic alignment	40%	32.00	32.00	30.00	30.00
Site feasibility	25%	18.38	18.96	16.88	19.40
Total non-financial evaluation score	100%	82.44	83.02	81.88	84.40
<b>Weighted non-financial evaluation score</b>	<b>70%</b>	<b>57.71</b>	<b>58.11</b>	<b>57.31</b>	<b>59.08</b>
Total financial evaluation score	100%	97.48	99.75	96.67	100.00
<b>Weighted financial evaluation score</b>	<b>30%</b>	<b>29.24</b>	<b>29.92</b>	<b>29.00</b>	<b>30.00</b>
<b>Total weighted evaluation score</b>	<b>100%</b>	<b>86.95</b>	<b>88.03</b>	<b>86.31</b>	<b>89.08</b>
<b>Ranking</b>		<b>3</b>	<b>2</b>	<b>4</b>	<b>1</b>

- 6.3 The analysis shows that Site 8 located at Nevill Hall Hospital attains the highest overall score from the evaluation process. Whilst the overall spread of scores is closely clustered Site 8 at Nevill Hall scores highest in both the non-financial and financial elements of the evaluation.
- 6.4 Therefore based upon this analysis the preferred site location for the RSC is site 8 located at Nevill Hall Hospital.

## 7 Sensitivity Analysis

7.1 In order to test the robustness of the results, sensitivity testing has been undertaken by applying the following changes to the evaluation framework:

- **Sensitivity 1** - Changing the balance of financial to non-financial to 20% and 80% respectively to place less emphasis on financial evaluation and more emphasis on non-financial evaluation;
- **Sensitivity 2** - Changing the balance of financial to non-financial to 40% and 60% respectively to place more emphasis on financial evaluation and less emphasis on non-financial evaluation;
- **Sensitivity 3** - Applying equal weighting to each element of the non-financial analysis.

7.2 Applying the sensitivity tests highlighted above to the base case weighted evaluation scores provides the following results.

**Figure 8 – Sensitivity analysis**

Sensitivity	Health Board / Hospital Site			
	Cwm Taf Prince Charles		Aneurin Bevan Nevill Hall	
	Site 2	Site 3	Site 6	Site 8
Base case weighted evaluation score	86.95	88.03	86.31	89.08
<b>Ranking</b>	<b>3</b>	<b>2</b>	<b>4</b>	<b>1</b>
Sensitivity 1 weighted evaluation score	85.45	86.37	84.83	87.52
<b>Ranking</b>	<b>3</b>	<b>2</b>	<b>4</b>	<b>1</b>
Sensitivity 2 weighted evaluation score	88.46	89.71	87.79	90.64
<b>Ranking</b>	<b>3</b>	<b>2</b>	<b>4</b>	<b>1</b>
Sensitivity 3 weighted evaluation score	85.87	87.08	85.02	88.35
<b>Ranking</b>	<b>3</b>	<b>2</b>	<b>4</b>	<b>1</b>

7.3 The sensitivity testing shows that, for all of the alternative scenarios, the results of the base case analysis are not subject to change in the overall ranking of the alternative sites. Site 8 at Nevill Hall remains the highest ranked solution under all of the scenarios.

## 8 Summary

- 8.1 This analysis has sought to set out a clear approach for assessing the preferred location for a RSC in South East Wales, in line with the Velindre NHS Trust Board approved evaluation methodology. Whilst acknowledging that some elements of the evaluation are judgement based, where possible, appropriate data and information has been used to underpin the analysis and has been provided by way of supporting information to this report.
- 8.2 Based on the analysis undertaken it is clear that the distribution of scores derived from the analysis is narrow with a margin of 3% between the highest and lowest scoring site options.
- 8.3 However, it should be noted that the highest scoring option, Site 8 on the Nevill Hall Hospital site, ranks first in both the non-financial and financial aspects of the evaluation.
- 8.4 On 20<sup>th</sup> June 2017 the RSC evaluation panel met to review all elements of the evaluation process and the supporting draft evaluation report. Having concluded their review the panel:
1. Approved the draft evaluation report;
  2. Approved the key findings and results outlined within the report;
  3. Approved the 'preferred' site location option to host the Radiotherapy Satellite Centre as being Nevill Hall Hospital (site 8) based upon the analysis presented.