

Agenda Item:	7	Meeting:	3T's Steering Group	Meeting Date:	22 July 2022
Report Title:	Update on helideck at Royal Sussex County Hospital, Brighton				
Sponsoring Executive Director:	Karen Geoghegan				
Author(s):	<div style="background-color: black; width: 100%; height: 1.2em; margin-bottom: 2px;"></div> <div style="background-color: black; width: 100%; height: 1.2em; margin-bottom: 2px;"></div>				
Report previously considered by and date:	N/A				
Purpose of the report:					
Information	<input checked="" type="checkbox"/>	Assurance	<input checked="" type="checkbox"/>		
Review and Discussion	<input checked="" type="checkbox"/>	Approval / Agreement	<input checked="" type="checkbox"/>		
Reason for submission to Trust Board in Private only (where relevant):					
Commercial confidentiality	<input type="checkbox"/>	Staff confidentiality	<input type="checkbox"/>		
Patient confidentiality	<input type="checkbox"/>	Other exceptional circumstances	<input type="checkbox"/>		
Link to Trust Strategic Themes:					
Patient Care	<input checked="" type="checkbox"/>	Sustainability	<input checked="" type="checkbox"/>		
Our People	<input checked="" type="checkbox"/>	Quality	<input checked="" type="checkbox"/>		
Systems and Partnerships	<input checked="" type="checkbox"/>				
Any implications for:					
Quality	There are clear and direct links to the quality of patient care with faster transfer of the critically ill patient to a place of definitive care and treatment.				
Financial	There are significant costs attached for the operation of the Helideck. These will be partially offset from previous considerations through the use of volunteers.				
Workforce	Volunteers will be recruited to operate the Helideck whilst managerial oversight is included in the Trust Fire Safety Manager's Role.				
Link to CQC Domains:					
Safe	<input checked="" type="checkbox"/>	Effective	<input checked="" type="checkbox"/>		
Caring	<input checked="" type="checkbox"/>	Responsive	<input type="checkbox"/>		
Well-led	<input type="checkbox"/>	Use of Resources	<input checked="" type="checkbox"/>		
Communication and Consultation:					
Yes					
Executive Summary:					
<p>The purpose of this paper is to detail progress with the operational and clinical commissioning of the helideck and to set out a draft proposal for the evaluation of the benefits associated with operating a helideck.</p> <p>The outstanding mandatory requirements to be undertaken prior to helideck opening are as follows:</p> <ol style="list-style-type: none"> 1. TKT Cladding; following a structural survey by the construction company's surveyor in 2018 and assurance surveys conducted by Cowen Consultants in 2020, it has been determined that the excessive downdrafts from landing and takeoff would breach the limitations of the cladding system on TKT. This is due to the age and backlog maintenance requirement of the fixing system. A programme of works is being developed and informed by intrusive surveys which are ongoing and the earliest expected date for completion is Q4 2022 / 2023. 2. A number of enablers were identified by CAA which must be rectified or completed prior to flight, the details and cost are within this paper and includes the following: 					

- a. Helipad de-icing.
 - b. Shielding of lights and night light testing.
 - c. Helipad communications.
 - d. Local fire service familiarisation visits.
3. Crewing of the Helideck / Approval of recommended operational delivery model – self delivery utilising Trust volunteers as helideck crew and firefighters.
 4. Testing the volunteer model via a comms campaign seeking expressions of interest at RSCH.
 5. Crew Training must be completed prior to opening.
 6. Purchase equipment PPE fire resistant clothing (helmets, tunics, leggings, boots) for Fire Fighting operations. This is sized to individuals and has a lead time.

The outstanding clinical mandatory requirements which must be undertaken prior to first use of the helideck are summarised include a review of existing clinical standard operating procedures by the Major Trauma Clinical Board.

3Ts Steering Group is asked to:

1. Note the contents of this paper.
2. Note the clinical and operational commissioning plan.
3. Note the operational and clinical issues that remain outstanding
4. Note the draft benefits realisation plan

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1. Introduction

The purpose of this paper is to provide the 3Ts Steering Group with an outline of progress with clinical and operational readiness with the helideck and sets out the basis for a benefits realisation plan to evaluate the implementation of the helideck.

A Helideck has been constructed on the RSCH site to ensure the timely transition of patients that have been involved in serious incidents to a place of definitive care. The transport of patients by helicopter to the hospital, which is a designated Major Trauma Centre for the population of East and West Sussex, is expected to have a significant, positive impact on the survival rate of those that are suffering from life-threatening conditions/injuries.

2. Background

The RSCH Brighton Helideck was initially constructed in 2018 with an expectation that the deck would be brought into operational use in June 2019. As of April 2022 the Helideck is not operational and a number of operational and clinical issues and considerations as set out in the attached commissioning plan.

The Trust is required to follow guidance from the Civil Aviation Authority (CAA) to ensure that the Helideck is capable of being operated in a competent and effective manner. The CAA makes specific recommendations around policies procedures and crewing of the Helideck in the event of a helicopter being required to bring patients to the hospital. The Trust has appointed Greendeck Operations Ltd to act as Technical Authority (TA) for the Trust. Greendeck Operations Ltd provide both technical advice to the Trust and support the development of operational policies and procedures and the training of support staff.

3. Operational Readiness

Following a review of the helideck infrastructure and its operation by Greendeck Operations Ltd there are a number of issues to complete prior to operational sign off by the CAA and these are set out in the attached commissioning plan. This most significant issues are detailed in Table 1 below.

Table 1

Issue	Current Position	Key Risks	Way Forward
1. Helideck Crewing	Preferred model is to seek volunteers from within the F&E department	Time taken to recruit, train, equip and familiarise crew offers risk to operational go live date	Expressions of interest will be sought for volunteer model once principle of additional responsibility payments has been established / agreed
2. Equipment Procurement	Equipment researched and costed to ensure safe operation of helideck and crewing.	No agreed budget to procure equipment. Long lead time on fire kit for the helideck crew once selected.	3Ts Steering Group to approve costs and allocate finances in accordance with this paper. F&E to procure equipment.
3. Building Cladding	TKT Cladding recognised as being at risk of failure from effect of helicopter down draft (airstream). Initial surveys to scope works underway.	Time taken to remediate cladding may be extended depending on scale and scope of subsequent works.	Capital Development to work with specialists to survey and remediate.

The following details the issues associated with these three key elements:

Helipad Crewing

It is important to ensure that the helideck can receive incoming flights safely and provide an immediate response to a hard landing / incident on the helideck and this is required by the CAA.

A trained emergency team trained in basic fire-fighting and rescue techniques is therefore required at landings and take offs. The current preferred option is to use a single crewing option with staff recruited from within the hospital on a voluntary basis. A pool of 20 volunteer staff (10 initially) will be recruited by the Facilities & Estates Directorate and trained in helicopter familiarisation, helideck operations, first response firefighting, basic extrication methods, securing the helicopter to the deck, basic first-aid and trauma care, dynamic risk assessment, incident response and operation of the Helideck firefighting systems.

This model is to be tested with our staff through an "expressions of interest " campaign which will commence once the principle of an additional responsibility allowance for team members has been agreed.

Equipment Procurement

An equipping list of essential equipment to enable safe operation has been identified including PPE for the Helideck team, aircraft tie downs, radios, basic rescue equipment in case of an incident and other items.

Such equipment includes the fire kit that will be worn by the attending Helideck Team. This is bespoke and needs to be sized to the team members and then ordered. This element of the procurement can only be undertaken following recruitment of the Team. The lead time for fire kit for the team is 12-16 weeks once the order is submitted.

Building Cladding

Surveys have been undertaken by specialist structural engineers, Ramboll and Cowen. This was to assess the effect of helicopter down draft on the building. The high level cladding on TKT was found to be in a state whereby, in the event of a helicopter landing, the pressure exerted by the helicopter down draft could cause the fixings to fail and the cladding panels to fall from the building.

To resolve this a remediation method, securing the cladding panels, is being developed. This requires further surveys which are currently underway with intrusive work adjacent to the Neonatal units and Trevor Mann Baby Unit and on levels 13 and 14, respectively. A solution will be installed over the coming months. The original intention is for the works to be complete by November 2022. Recently, complexities in the scope and scale of this work have indicated that this may now extend into Q4.

Other items:

As mentioned previously, in addition to the above three key issues, the following relatively minor issues have been identified by the CAA who will issue a letter of completion subject to closure of the following items:-

- Helideck de-icing (procure de-icing kit).
- Shielding of lights and night light testing (pilot to test light effects once cladding remediated).
- Helipad communications (procurement of radios and install telephone, once budget agreed).
- Local fire service familiarisation visit (book local station fire crews to visit; this is already underway).

An integrated clinical and operational readiness commissioning plan summarising the outstanding issues, the responsible leads, and expected completion date is included at Appendix 1.

4. Clinical Readiness

The Clinical Lead for Major Trauma and the Major Trauma Centre (MTC) has advised that current clinical systems and pathways need to be fully tested to ensure that the MTC is ready to receive Major Trauma patients via the helideck.

Existing pathways will be critically appraised and new clinical pathways and standard operating procedures will need to be developed, tested and approved by the Major Trauma Committee, for example, testing the processes of retrieval of Major Trauma patients from the helideck, and their conveyance to either the resuscitation cubicles or the polytrauma theatre on Level 5 and decision-making and the availability of expertise relevant to this. This work is underway.

Table 2

Issue	Current Position	Key Risks	Way Forward
1) Clinical and medical operational flow SOP	SOPs for existing pathways to be critically appraised and tested	Delay of movement from Helideck to ED / Theatre and decision-making relating to patient management	Clinical Team working through and complete SOP relating to decision-making from Helideck to resuscitative destination (ED versus Theatre)
2) Resuscitative Surgery SOP	No unifying SOP exists (the Trust has historically approached this per sub-speciality)	Current outdated practices expose patients to avoidable harm and variable outcomes	Development of unified Resuscitative Surgery SOP

5. Activity Overview: HEMS data audit

Kent, Surrey & Sussex Air Ambulance Trust (KSSAAT) operate a fleet of three helicopters out of its base in Rochester and Redhill.

As RSCH does not currently have an operational helideck patients who are critically unwell and require immediate life-saving resuscitative treatment are transported to RSCH by helicopter and land at a nearby East Brighton park necessitating secondary land ambulance transfer to the hospital, with time-critical patients potentially "overflying" RSCH to another MTC with an operational helideck.

Activity modelling using HEMS data (attached at Appendix 1) has indicated that in addition to patients already conveyed to RSCH by air ambulance with a secondary transfer, an additional 23-25 patients (adults and paediatrics) per annum would be conveyed to RSCH following the opening of the helideck; this is predicted on air ambulance arrivals in daylight hours only (07:00 hrs to 19:00 hrs). This would involve around 125-145 flights per annum.

It should be noted that of the expected 25 additional major trauma patients per annum a very small number of paediatric major trauma patients will be conveyed to RSCH (although RSCH is not a designated paediatric MTC) and clinical pathways will need to be developed with the Royal Alexandra Childrens Hospital.

However, it should be noted that up to 10 further patients a year may be conveyed by other operators including Hampshire and IoW Air Ambulance and the Coastguard.

6. Helipad benefits

The transport of patients by helicopter to the Royal Sussex County Hospital (RSCH), which is the designated Major Trauma Centre for the population of East and West Sussex, is expected to have a significant, positive impact on the survival rate of those that are suffering from life-threatening conditions/injuries.

Benefits from operating the helideck are expected to include:

- Improvements to patient outcomes and reduction in deaths
- Patients are kept in the Sussex Trauma Network facilitating quicker repatriation and rehabilitation
- Delivery of patients straight to CT, where appropriate, further reducing time to treatment; this will help improve patient outcomes and reduce bed days
- Delivery of patients straight to trauma theatre, where appropriate, further reducing time to treatment
- Faster turnaround of HEMS and SECAMB vehicles released from lengthy transfer duties
- Patients within the Sussex network will receive equity of care
- Reductions in length of stay
- Enhance the reputation of Brighton MTC
- Direct and immediate access to the MTC avoiding the need for multi agency logistical arrangements for patient transfers from East Brighton Park to the hospital
- Decrease in transfer times for many acutely ill patients from Kent, Surrey and Sussex
- Decrease in the number of Sussex patients being taken by helicopter transfer to other out of network MTCs to access urgent trauma services

7. Measurement of Benefits

The Trauma Audit and Research Network provide data against national KPIs to the MTC and the Sussex Trauma Network. It is proposed that the following KPIs are used to measure the clinical benefits of the helideck:

- Improved Time of Transfer as measured by pre-hospital care data
- Improved Time to CT as measured by Brighton MTC TARN data
- Improved Time to Operation as measured by Brighton MTC TARN data
- Length of Stay per ISS (Injury Severity Score) as measured by Brighton MTC TARN data
- Time to repatriation as measured by UH Sussex repatriation data
- Standardised rate of survival as measured by Kings MTC TARN data

A draft Benefits Realisation plan is attached at Appendix 3 which will be further developed with baseline information and targets.

8. Conclusion

This paper has provided an update on the the current operational and clinical readiness of the RSCH helideck and the mandatory requirements that must be undertaken by the Trust as part of operationalisation. The Steering Group should be assured that whilst some significant issues remain progress on both clinical and operational issues is being made with a view to the helideck being operational in the first quarter of 2023.

9. Recommendations

The 3Ts Steering Group is asked to:

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Appendix 1

Audit of HEMS data

	All RSCH HEMS patients (HEMS air transport and HEMS ambulance 24hrs)	RSCH HEMS patients during daylight (HEMS air transport and HEMS ambulance daylight only)	RSCH aircraft jobs conveyed	Patients injured in Sussex and taken to other MTCs	Potential daylight helipad landings. HEMS jobs in daylight hours	Potential landings 0700-1900 in dark
2013	79	56	47	27	74	3
2014	157	128	114	86	200	1
2015	188	150	129	56	185	4
2016	178	127	114	42	156	1
2017	127	94	81	31	112	0
2018	155	118	97	29	126	3
2019	160	117	103	36	139	2
2020	144	113	102	23	125	1
2021	189	123	100	24	124	3
2022	46	34	30	6	36	3
Total	1423	1060	917	360	1277	21
Average *	162	121	105	41	146	2
Average last full 5 years	155	113	97	29	125	2
*2013 & 2022 incomplete years so not included in averages						