

17 SUMMARY OF MITIGATION

17.1 The following significant and relevant non-significant effects have been identified as requiring mitigation during construction and operation of the proposed JFH. The Framework CEMP presented in Appendix O-1 EIS Volume II will be developed by the contractor and therefore measures that would be included within the CEMP have not been repeated within the mitigation summary tables.

Table 17.1 Summary of demolition and construction mitigation

Receptor	Demolition and Construction Effect before Mitigation	Proposed Mitigation	Demolition and Construction Effect after Mitigation
Air Quality			
All effects during construction are not significant with the implementation of the Framework CEMP which is considered embedded mitigation, therefore no additional mitigation is proposed.			
Noise and Vibration			
Residential receptors	Significant effect as a result of increased noise from construction vehicles.	Construction vehicles mainly accessing the site between the hours of 0800-1800 Monday to Friday and 0800-1300 Saturday.	Significant effect for properties located on Lewis Street are likely to be impacted during demolition and construction due to diversions, however there are likely to be no health impacts.
	Adverse effects from vibration	CEMP to outline best practice. Liaison with nearby residents to reduce the impact of perceptible vibration	Noise Sensitive Receptors (NSRs) A (Kensington Place) and B (Kensington Place) have the potential for vibration to be perceptible to building occupants for short periods.
Hospital receptors (patients and staff)	Significant effect from construction noise	Planning of demolition in order to provide screening from remaining structures. Noise barriers to reduce levels at the hospital buildings. Positioning of/screening/enclosures for generators or pumps. Agreements between JFH and the contractor about working hours, construction and mitigation methods.	Significance criteria likely to be exceeded at NSRs A-F for short periods during phase 1A. Mitigation to reduce noise levels as to not cause likely health impacts. Significance criteria likely to be greatly exceeded at NSR H for short periods. Recommended to empty

Receptor	Demolition and Construction Effect before Mitigation	Proposed Mitigation	Demolition and Construction Effect after Mitigation
			building for at least the first three stages of phase 2, or if this is not possible, carefully coordinate site and ongoing hospital activities.
Hospital receptors (operational departments)	Adverse effects from vibration	Schedule construction/demolition work with Theatre, Radiology, Pathology and other hospital activity to minimise operational time overlap, in particular high disturbance activities.	Mitigation options have been outlined in Appendix C-3 and are intended to reduce the vibration transmitted to sensitive occupancies as far as is reasonably possible. However, the reduction in vibration cannot be predicted with confidence at this stage and hence some risk of disruption remains and is considered to be significant. For further details regarding demolition and construction vibration on the operational hospital site refer to Appendix C-3
		Position equipment, where possible, away from the Lab Block to minimise vibration.	
		Concrete munchers, saw cutting, and hydro demolition are preferred over the use of concrete breakers and jack-(pneumatic) hammers.	
		The use of bored or screw piling is essential rather than percussive or vibratory methods.	
		Where excavation is required in rock, the use of lower vibration excavation techniques such as rock saws and ripping rather than percussive breakers may be required. Fill materials require compaction without the use of vibratory methods.	
		Light rather than heavy machinery to be used to excavate and transport soil, debris and other construction materials to and from the site. Machinery with rubber tyres, instead of tracks, to be used.	
		Install vibration isolation such as damper pads, active vibration tables, optical tables, etc., if not already installed and where practical.	

Receptor	Demolition and Construction Effect before Mitigation	Proposed Mitigation	Demolition and Construction Effect after Mitigation
			NSRs A (Kensington Place) and B (Kensington Place) have the potential for vibration to be perceptible for short periods
Traffic			
Severance (increased vehicles)	Significant adverse severance effect from increase in vehicles using Lewis Street in Phase 1A and Patriotic Place in Phase 1B.	Introduction of a temporary 20mph speed limit to be implemented on Lewis Street. Traffic signals are proposed at the Gloucester Street/Seaton Place/Patriotic Place junction to accommodate the two-way traffic flow on Patriotic Place. A signalised pedestrian crossing is proposed as part of these on the Patriotic Pace entry to this junction.	No significant effect
	Significant adverse severance effect from increase in the number of HGV trips on Kensington Place and Kensington Street in Phase 1A and Patriotic Street in Phase 1B.	The CEMP to propose the provision of banksmen along the most affected receptors, including Kensington Place, Kensington Street and Patriotic Street to control HGV movements. Potential alternative construction route for Phase 1B utilises the ring road, which could reduce the impact on Patriotic Street.	Significant severance effect from increase in the number of HGV trips during construction on Kensington Place, Kensington Street and Patriotic Street.
Pedestrian delay	Significant adverse effect on pedestrians from increased traffic flows on Lewis Street in Phase 1A and Patriotic Place in Phase 1B.	Introduction of a temporary 20mph speed limit to be implemented on Lewis Street.	No significant effect
		Traffic signals are proposed at the Gloucester Street/Seaton Place/Patriotic Place junction to accommodate the two-way traffic flow on Patriotic Place. A signalised pedestrian crossing is proposed as part of these on the Patriotic Pace entry to this junction.	

Receptor	Demolition and Construction Effect before Mitigation	Proposed Mitigation	Demolition and Construction Effect after Mitigation
	Significant adverse effect on pedestrian delay from displacement of public parking from Patriotic Street MSCP to other car parks in St Helier.	The Travel Plan will explore methods of keeping existing users up to date with construction proposals and improve awareness of the States of Jersey website which provides real time information on the number of car parking spaces available within the MSCPs.	No significant effect
Pedestrian amenity	Significant adverse effect on pedestrian amenity on Lewis Street due to increases in traffic flow.	Reduction of traffic speeds from 30mph to 20mph on Lewis Street	No significant effect
	Minor adverse effect on pedestrian amenity resulting from increased traffic flows from making Patriotic Place two-way	Introduction of a signalised pedestrian crossing on the Patriotic Place entry to the junction with Gloucester Street and Seaton Place.	No significant effect
Fear and Intimidation	Significant adverse effect from additional HGV trips on Kensington Place, Kensington Street and Newgate Street.	The CEMP would propose a network of banksmen that would operate on Kensington Place, Kensington Street and Newgate Street to control HGV deliveries.	No significant effect
Driver delay	Negligible adverse effect on driver delay.	Mitigation is proposed at the following junctions: <ul style="list-style-type: none"> • Esplanade/Kensington Place; • Rouge Bouillon/Savile Street/Elizabeth Place/Parade Road; • The Parade/Union Street; and • St Aubin's Road/Kensington Street/Peirson Road. 	No significant effect

Receptor	Demolition and Construction Effect before Mitigation	Proposed Mitigation	Demolition and Construction Effect after Mitigation
Biodiversity			
Bats	Significant effect at the neighbourhood level due to potential loss of small number of roosts through demolition of buildings.	Time construction works outside of roosting season and provision of new roosts (if required) under a licence from Staes of Jersey.	No significant effect
Breeding Birds (mainly gulls)	Significant adverse at the local St Helier level due to the disturbance / destruction of nests and eggs through demolition of buildings.	Timing of construction works outside of breeding season and /or gull control measures.	No significant effect
Geology, hydrogeology and contamination			
Human health (contamination)	Significant adverse effect - effect on health of construction workers due to exposure to potentially contaminated soils/soil dust, fibres and or groundwater.	Ground investigation to identify presence and composition of potential ground and groundwater contamination in locations tested.	No significant effect
	Significant adverse effect on human health due to the exposure to ground gas.		
	Significant adverse effect on health of construction site neighbours due to exposure to potentially contaminated soils dust.		
Water resources			
St Aubin's Bay	Significant adverse effect from construction materials and debris from site washing into surface water	Implementation of the framework CEMP, including maintenance of construction vehicles to reduce risk of hydrocarbon contamination and management of	No significant effect

Receptor	Demolition and Construction Effect before Mitigation	Proposed Mitigation	Demolition and Construction Effect after Mitigation
	sewer, which then outfalls into St Aubin's Bay.	construction materials due reduce risk of accidental spillage.	
Heritage			
Granite Block	Significant beneficial effect from the physical changes to the building from removal of modern extensions.	Sensitive construction practices.	Significant beneficial effect
Archaeology	Significant adverse effect to unknown archaeology from destruction.	Archaeological watching brief.	No significant effect
Geo-archaeology/ Palaeoenvironment	Significant adverse effect from destruction of environmental deposits through construction/piling.	Implementation of a programme of geoarchaeological and palaeoenvironmental investigation to be carried out following the demolition phase.	No significant effect
Waste			
Waste management infrastructure in Jersey	Significant effect due to limited waste management capacity on Jersey.	The Preferred Demolition Contractor would: <ul style="list-style-type: none"> - consider crushing demolition materials for recycling as aggregates on-site; - identify opportunities for recycling the demolition materials through a recycling contractor or in other external projects; - segregate hazardous waste to avoid contamination of 'clean' waste; - communicate with other waste management contractors and facilities to notify them of the quantities and timings of demolition waste. 	Significant effect
		Where on-site re-use or recycling of excavation materials are not feasible the Preferred Construction Contractor (PCC) would identify opportunities through a recycling contractor or in other external projects.	Significant effect

Receptor	Demolition and Construction Effect before Mitigation	Proposed Mitigation	Demolition and Construction Effect after Mitigation
Socio-economics			
Local residents	Significant adverse effect from the demolition of properties.	Provide support to relocate through appointed agent.	Significant effect
	Construction traffic and reductions in amenity value.	Air Quality and Noise – measures outlined in assessments and to be secured through CEMP. Traffic – measures to be secured through the Construction Transport Management Plan.	No significant effects
Local businesses	Significant adverse effect from loss of business premise	Support to relocate through local agent (BNP Paribas).	Significant adverse effect
	Significant adverse effect from construction traffic and disruption to access	Planning and coordination to manage HGV movements in and out of construction site and avoidance of excessive build-up of traffic on Kensington Place (to be included in the CEMP)	No significant effect
	Significant adverse effect from loss of amenity	Air Quality and Noise – measures outlined in assessments and to be secured through CEMP. Traffic – measures to be secured through the Construction Transport Management Plan	No significant effects
Property market and land use	Significant adverse effect from increase in demand for accommodation: registered accommodation	Accommodation strategy, potentially incorporating an accommodation village or similar	No significant effect
Townscape and visual			
No additional mitigation is proposed in addition to that incorporated into the modelled parameters and Design Principles			

Table 17.2 Summary of operational mitigation

Receptor	Operational Effect before Mitigation	Proposed Mitigation	Operational Effect after Mitigation
Air Quality			
There are no significant effects to air quality during operation of the proposed JFH and no mitigation is required.			
Noise and Vibration			
There are no significant effects from noise and vibration and no mitigation is required.			
Traffic			
Driver delay	Negligible adverse effect on driver delay.	Installation of traffic signals and the provision of a signalised pedestrian crossing on the north-west side of the Newgate Street/Gloucester Street junction.	No significant effect
Biodiversity			
There are no significant effects to biodiversity and no mitigation is required.			
Geology, hydrogeology and contamination			
Groundwater (hydrogeology)	Significant effect - Potential barrier to groundwater flow created by the basements and secant pile wall.	Implementation of drainage solutions along the perimeter of the JFH developments (Ground investigation to confirm groundwater containing stratum beneath the site).	No significant effect
Human health (contamination)	Significant effect on human health due to exposure to ground gas.	Ground investigation to identify ground gas (if present) in locations tested.	No significant effect
Water resources			
Hospital	Neutral effect from flooding.	Hospital to be constructed with building threshold a minimum of 0.6m above top flooding level. Basement to be sealed to stop water ingress.	No significant effect

Receptor	Operational Effect before Mitigation	Proposed Mitigation	Operational Effect after Mitigation
Heritage			
Grade I Listed Building and Entrance Lodge	Significant beneficial and adverse effect due to changes to setting. Adverse effect due to increased scale and mass but beneficial changes to setting due to removal of the 1960 and 1980s Blocks, creation of public realms and open space.	Removal of the 1960 and 1980s Blocks and creation of public realm to enhance the setting of the listed building, removal of unsympathetic modern additions and continued use for non-clinical hospital functions.	Significant beneficial effect
Waste			
Waste management infrastructure in Jersey	Significant effect due to the limited waste infrastructure in Jersey.	Segregation of healthcare waste. Early contact with waste management facilities to notify them of the additional quantities of healthcare waste that would be generated to ensure they can plan and manage the waste appropriately.	Not significant
Wind			
Pedestrians	Significant effect from high wind accelerations and exceedance of 'Standing' conditions along Newgate Street where the A+E entrance is located.	Addition of mitigation measures along Newgate Street (either a roof or tested landscaping such as trees and/or porous vertical screens).	Not significant Acceptable 'Standing' conditions around entrances
	Significant effect from high wind accelerations and exceedance of 'Standing' conditions around the western face and corners of the Westaway development, where entrances are to be located.	Addition of local mitigation measures around entrances such as soft landscaping, porous vertical screens or recessing of the entrances by at least 1m.	Not significant Acceptable 'Standing' conditions around entrances

Receptor	Operational Effect before Mitigation	Proposed Mitigation	Operational Effect after Mitigation
Socio-economics			
There are no significant adverse socio-economic effects and no mitigation is required.			
Townscape and Visual			
No additional mitigation is proposed in addition to that incorporated into the modelled parameters and Design Principles.			