

JERSEY FUTURE HOSPITAL

CO025 – PROOF OF CONCEPT

SITE OPTION ADDENDUM

APPENDIX 5 LOCAL
INFRASTRUCTURE & TRANSPORT
ASSESSMENT

QUALITY ASSURANCE

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Position: Project Manager



Subject TN-TRA-CO025-001 Technical Note – New Build and Construction Stage Transport

Considerations. Final Preliminary Issue – P2

Date 31 August 2016 Job No/Ref 237035

1 Introduction

This technical note has been prepared to support the preparation of the Proof of Concept Exercise that forms Change Request Nr. 25 as part of the Jersey Future Hospital Scheme.

The site options being reviewed as part of this document are:

• Jersey General Hospital and acquisition of buildings to the south-west on Kensington Place

There are a number of relocation projects proposed to enable the demolition of Peter Crill House and the Gwyneth Huelin Block, these are considered as part of the separate Enabling Schemes Engineering Impacts Overview document.

The purpose of this technical note is to identify transport considerations for the relevant aspects of the Change Order 25 proposal.

This technical note is supported by the following plans:

- SK-TRA-CO025-001-P2-All Transport Types
- SK-TRA-CO025-002-P1-Delivery Routes
- SK-TRA-CO025-003-P2-Demolition and Construction
- SK-TRA-CO025-004-P1-Car Parks
- SK-TRA-CO025-005-P2-Diversions

The proposals for CR024 Option C have largely been continued for this option. This will include the re-designation of some roads to two-way operation to achieve a greater degree of resilience in the event of a road becoming blocked and provide more straightforward routes for direct access to routes to and from the hospital site in all directions.

In keeping with best design practices for hospitals, the routes for emergency and operational vehicles associated with the hospital have been designed to be separate from those of general hospital associated traffic including visitors and patient routes. The proposed site configuration lends itself well to this approach with proposed routing being primarily from the north for blue light and delivery traffic and from the south for patient and visitor access.

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2 Existing Conditions

The following sections describe the transport network appraisal that has underpinned the proposed site access strategy.

2.1 Accessibility by Walking and Cycling

- The site primarily interfaces with Gloucester Street, Kensington Place and Newgate Street. Gloucester Street has been identified as forming a key pedestrian/cycle desire line providing onward connectivity to the town centre, waterfront area and Parade Gardens.
- Gloucester Road features a wide carriageway with two running lanes of traffic adjacent to the site and on-street parking bays.
- Kensington Place is sufficiently wide to accommodate on street parking and footways on both sides of the carriageway.
- The Parade has two signal controlled crossings, in the vicinity of the Gloucester Street and Lewis Street junctions. The Elizabeth Place junction incorporates uncontrolled refuge islands that facilitate uncontrolled staggered crossing movements in this area. Gloucester Street has controlled crossing facilities at the Patriotic Place and Esplanade junctions and an uncontrolled refuge island crossing at the junction with The Parade.
- The provision of additional controlled crossing facilities is also important in creating direct linkages that afford priority of pedestrian movement over road traffic. The Elizabeth Place and Spectrum corridors have been previously identified as key desire lines where this form of provision could be appropriate.
- Further, more detailed work is required to establish the capacity for a cycleway on the local highway surrounding the Hospital site (The Parade/Gloucester Street/Newgate Street/Kensington Place). Barriers to implementation are initially thought to be the carriageway width on both Newgate Street and Kensington Place, and potential conflict on Gloucester Street between parked vehicles, moving vehicles, pedestrians and cyclists. Routes across the Parade Gardens have been discussed and will be reviewed in further design stages including links to the new hospital site.
- All controlled crossings located as part of the proposal could be Toucan crossings and cater for both pedestrian and cycle movement.

2.2 Accessibility by Public Transport

- The site is well placed in relation to Liberation Bus Station, with a walking distance of around 600 metres. The Bus Station functions as the main hub for all island-wide services.
- Although buses do operate along The Parade and Gloucester Street, the level of service is limited in terms of frequency and coverage. The current one-way operation of these roads also means that the bus stops are not nearside to the site, reinforcing the need for additional pedestrian crossing provision.

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• There may be scope to reconfigure the existing bus network in such a way that could afford direct access to a more extensive range of services. This would require further dialogue with the DfI, the Parishes and Liberty Bus. Any decision making would need to be mindful of the potential implications on existing service passengers.

- Any new or existing bus stops will need to be upgraded to provide formal passenger waiting facilities, including a shelter, seating, timetable information and kerbing suitable for low floor access. It is envisaged that the dimensions of these will be finalised at a later stage but be in line with those that have been consulted on by DFI in the last number of years. Given that the dimensions used in Jersey are 1.3m x 3m the possibility of build outs will be considered.
- A new road is being formed adjacent to the new building linking Gloucester Street and Kensington Place. This road is proposed to have controlled access with a primary function being to provide 'blue light' and delivery access to and around the building. Discussions with DfI have been held and the potential for this road to be used for public transport routes considered. This is achievable and further discussions will be held to finalise this.

2.3 Highway Access

- The one-way traffic flow operation of the inner ring road poses a constraint in how it limits the available route choice and compromises network resilience in the event that a route becomes blocked. Appropriate traffic management and an agreed traffic management strategy are key to mitigating any potential impact of the proposed scheme.
- To allow emergency vehicles to overcome this potential problem it is proposed to allow two-way 'blue light' flow along an extended Newgate Street. This would be controlled access via bollards or similar to avoid the route becoming a 'rat-run'.

2.4 Parking Locations and Capacity

Walking distances to the car parks within St Helier are summarised in Table 1 below. It can be seen that the closest car parks to the proposed hospital are Patriotic Street, Sand Street and Elizabeth Lane.

The 2015 DFI Parking Survey also summarised in Table 1 shows that there is capacity within the local public car parking supply to cater for short to medium term relocation of parking due to construction of the new Hospital.

Public Off- Street Car Park	Capacity	SPACES Available 08:00	08:00 % Space Available	SPACES Available 11:00	11:00 % Space Available	SPACES Available 14:00	14:00 % Space Available
Patriotic Street	620	404	65	63	10	126	20
Sand Street	542	494	91	205	38	225	42
Elizabeth Lane	44	19	43	6	14	18	41

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Esplanade	533	12		2		0	0		1	0	2
People's Park	55	37		67		9	16			9	16
Vic. Ave Lay-by 1	70	6		9		1	1			2	3
Inn on the Park	43	27		63		6	14		1:	2	28
Minden Place	249	206	•	83	8	33	33		12	7	51
Nelson Street	39	8	2	21		2	5			0	0
Charles Street	48	37	,	77		6	13		;	5	10
Vic. Ave Lay-by 2	79	69	:	87	2	21	27		2:	3	29
Ann Place	145	4		3		0	0		9	9	6
Midvale Road	59	23	·	39	1	.8	31		1	6	27
Pier Road	715	580	:	81	23	37	33		30	3	42
Snow Hill	95	77	:	81		0	0		1:	2	13
Vic. Ave Lay-by 3	64	41	(64	5	51	80		50	0	78
Green Street	431	250	:	58		0	0		51	2	12
Vic Ave - Lay-by 4	13	8	(62		8	62		,	7	54
Route du Fort	81	40	4	49	2	26	32		30	0	37
La Collette	25	13		52		7	28		1:	5	60
First Tower	123	104		85	9	9	80		10	1	82
Totals	4273	2606		61	96	53	23		126	9	30
Walking dista	Walking distances to hospital										
>200m 200m-400m				400m-800m 800m-1200m			0m	1200m-2000m			

Table 1 – DFI 2015 Parking Survey Data with Walking Distances

A spot check of the multi storey car parks capacity using the SoJ website (http://www.gov.je/travel/motoring/parking/pages/carparkspaces.aspx) suggests that the above data is representative of normal occupancy conditions.

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Next stage work will take into account both permitted and committed developments of note within the St Helier built up area including Gapse House, 66-72 Esplanade (currently to be tenanted by the Royal Bank of Canada and Deloitte).

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3 Demolition and Construction

3.1 Construction Vehicle Routing

Whilst no detailed Waste Strategy has currently been devised, it is expected that where possible 'rubble' waste will be transferred to the La Collette inert waste facility via the A1 and A16. Where appropriate metal waste will be transferred to the Bellozanne facility via the A1/routes Nouaux/Bellozanne Valley.

In order to keep disruption to the local highway network to a minimum during the demolition and construction stage the suggested routing of construction vehicles is via the A1/Kensington Street/Gloucester Street in a circular route.

To aid in this circular heavy vehicle route it is proposed that Newgate Street is extended to Kensington Place. Initial first movements associated with the demolition of properties on Kensington Place will require access along Kensington Street and St Aubins Road.

As part of the demolition/construction stage it is anticipated that two traffic management areas and at times road closures may be required. The first of these could be on Kensington Place to allow access to the construction site from the north. The second could be located on Gloucester Street and allow access from south of the construction site.

Due to the potential closure of Kensington Place there will be a temporary loss of access to existing properties and a minimal increase in vehicular flow on Lewis Street. Exit from the Patriotic Street Multi Storey Car Park on to Kensington Place may also be lost for the period of closure.

The potential closure of Gloucester Street temporarily removes a main east-west route and a full traffic management plan is required to route vehicular traffic appropriately. Limited access will be maintained along a portion of Gloucester Street for hospital drop off and on-site ambulance parking. To allow this to be possible a length of Gloucester Street will be temporarily changed to allow two-way running, with the junction of The Parade/Gloucester Street altered to allow the right hand turn movement from Gloucester Street towards Union Street. Considerations to a hospital turning section in front of the new temporary building are being made although these are challenging in terms of remaining space once the temporary building design is developed and there is the likelihood that this provision will need further review.

At this stage, the construction and demolition methods are unknown but consultations with DfI surrounding these road closures have been held and significant concerns raised for the road closure to Gloucester Street. The significant impacts on the network will need to be avoided through construction method to minimise required closure of lanes. This has been identified as a risk and will form part of the overall design and contractor engagement discussions with conditions enforced on construction as appropriate.

All of the above is subject to development with construction contractor in terms of their requirements and these measures will be for potential temporary situations during the construction and demolitions stage.

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The above routing and measures are shown on Plan SK-TRA-CO025-003 Demolition and Construction.

3.2 Car Parking During the Construction Stage

As shown on Plan SK-TRA-CO025-004 'Car Parking During the Construction Stage' a total of 66 car parking spaces will be displaced from the existing hospital building. A brief initial assessment based on DfI April 2015 Public Car Park Survey suggests that there is spare capacity in a number of car parks within walking distance.

An initial review of local parking has been undertaken which suggests there is sufficient parking locally to the new building and options for effective provision will be investigated in more detail in further design stages, potential considerations may be:

- Longer periods of parking may require the use of the Pier Road MSCP and a hospital operated shuttle bus.
- Discussions with local car park leads, including Sand Street, for extended parking, hospital provided passes etc.

Displaced disabled parking is being reviewed for optimum on site provision.

At this stage it has been suggested that residents parking (Kensington Place etc.) that is displaced could be relocated to People's Park. The DfI 2015 Parking Survey suggests that of the 55 spaces available at People's Park, 37 are available for use at 08:00, suggesting a low level of overnight parking and available spare capacity for residents who use their cars on a commuting basis i.e. use their cars for trips to work and therefore do not park at home during the day. Further, more detailed work and survey is required at the next stage to determine the actual requirements.

3.3 Diversion Strategy

This plan has been undertaken to inform discussions and prompt initial thinking with regards to impacts to the wider road network. When a contractor is involved, this can be developed further to provide a more accurate review of impacts and mitigation measures.

The initial diversion strategy would be to direct vehicular traffic to the A1 using the permitted routes. Given the road hierarchy and one-way system within the centre of St Helier this can be achieved by utilising Halkett Place, Hill Street and the Esplanade. Routes to the north are unaffected.

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4 Proposed New Building Arrangement

4.1 Proposed Trip Generation and Distribution

Previous work undertaken on the potential redevelopment of the Hospital site has identified headline trip generation estimates. These estimates have been developed to provide an initial basis for quantifying the potential number of travel movements that may need to be accommodated on the transport networks. The estimates have been based on available information and a series of assumptions, and will need to be the subject of further refinement as more detailed work is undertaken.

The key assumptions include:

- the hospital will treat 180,000 patients per year, equivalent to around 500 patients per day;
- staffing levels are to remain broadly consistent with the current total of 1,587 across the General Hospital (1,330) and Overdale (257) sites;
- visitor levels assumed to be equivalent to two per patient; and
- journey by mode patterns to be in line with those identified in the General Hospital Travel Plan (Halcrow, March 2005).

Table 2 presents an indicative trip forecast breakdown.

Travel Mode	Patient Mode Share	Patient Trips	Staff Mode Share	Staff Trips	Visitor Mode Share	Visitor Trips	Total
Car	70%	350	59%	937	70%	700	1,987
Walk	21%	105	28%	445	19%	210	760
Cycle	0%	0	5%	80	0%	0	80
Bus	4%	25	4%	64	5%	50	139
Other	5%	30	4%	64	6%	60	154

Table 2 - Forecast Daily Journeys by Mode

The headline forecasts in Table 2 exclude trips associated with the hospital operation, including deliveries, servicing and patient transport.

Most of the trips in Table 2, with the exception of in-patients, would need to be doubled to take account of the two-way nature of the trip making. Adjustments have been made where appropriate to reflect any site specific characteristics that are expected to influence travel behaviour.

The apportioning of trips to routes has been broadly based on key centres of population, the attractiveness of the route (in terms of potential journey time) and expected car parking behaviours.

A percentage range has been provided in some cases due to the early nature of these works to provide an overall indication of possible numbers at this stage given the early nature of this exercise.

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The assumed distribution of car trips is presented in Table 3 below.

Route	Distribution	Daily Car Trips*			
Route A (Gloucester Street)	10% - 30%	397 – 1,192			
Route B (A1 East)	55% - 85%	2,186 – 3,378			
Route C (A1 West)	5%	199			

Table 1 - Forecast Daily Car Journeys - Distribution

4.2 Proposed Highway Mitigation

As part of a completed new facility build the following highway mitigation works are being considered for further development, initial considerations are as follows and shown on SK-TRA-CO025-001-P1-All Transport Types:

- Junction of Elizabeth Place/The Parade/ Cheapside possible reconfiguration of pedestrian island splitter and introduction of 'Blue Light' vehicle detector to allow direct route from Elizabeth Place to Kensington Place for emergency vehicles approaching from the north. This mitigation would also involve the signalisation of Cheapside at the junction. This would provide a critical time saving over the route around The Parade and Gloucester Street.
- Potential two-way running on Kensington Place. This aids direct access from the Emergency Department onto Newgate Street. This will remove a small amount of on-street parking.
- New Perimeter roads to the new building at the north east and south west and around a new service road for deliveries as shown.
- A new junction for the new Service Road with Kensington Place.
- Following on from its use during the demolition and construction stage, the extended Newgate Street will be maintained to allow two-way access for emergency vehicles and delivery vehicles. The use of the road will be controlled by bollards or other suitable means of temporary closure/access so as to only be for hospital operational use.
- The junction of Newgate Street with Gloucester Street to take into account the proposed two way running of Newgate Street for Emergency vehicles and Delivery vehicles.
- Potential improvements to the existing gate house junctions associated with new internal layout and entrance in front of Granite Block.
- The mitigation of the Parade/Gloucester Street junction that would occur during the construction stage will be reversed and Gloucester Street would once again be one-way westbound to the A1.
- New pedestrian crossings will be installed on Gloucester Street, Newgate Street and Kensington Place.
- Potential for a bus stop on Gloucester Street subject to the relocation of the on street cycle and vehicular parking.
- Cycle lane facilities will be reviewed in further detail at further stages. On site cycle parking facilities will be reviewed for effective incorporation to support the new hospital.

^{*} Doubled to reflect two-way nature of journeys

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4.3 Proposed New Building Delivery Routes

The principle of traffic circulation serving the new hospital is to separate operational vehicles e.g. blue light, deliveries etc. from visitors, staff and patients as far as is practicable.

A new service road will be constructed around the proposed western block which would allow access to a number of loading docks for delivery.

Delivery vehicles would theoretically be able to use all routes to access the service route with prior agreement with the Hospital. The preferred route for all delivery traffic would be via Kensington Place.

The proposed routes are shown on Plan SK-TRA-CO025-002 'Delivery Routes'.

4.4 Proposed New Building Parking

Due to the provision of a new hospital on the existing hospital site, the parking approach as identified within CO021 has been adopted for the purposes of this initial study. There is likely to be reduced potential area for onsite parking given the reduced site footprint associated with the site so short stay spaces identified for site provision will be reviewed based on available site location during the next design stage.

This agreement, based on site sustainability and the implementation of a Travel Plan, is in line with permitted development in the vicinity of the proposed site and therefore a valid approach to addressing the parking provision required at the proposed Hospital site. The existing on-site spaces lost due to the proposed development will be relocated within the new site.

4.4.1 Work Required at the Next Stage

The following tasks are required to be undertaken at the next stage:

- A comprehensive review of the on-street parking within the area, with specific attention on both Gloucester Street and Kensington Place;
- Local parking in other car parks;
- Potential for increasing the 'Hospital Only' element of the Patriotic Street MSCP;
- Potential for Patriotic Street MSCP extension; and
- Positioning of the relocated on-site parking provision.

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5 Risks/Opportunities

5.1 Risks

- This site appraisal has been based on an initial review of accessibility, taking account of the range of transport modes that will need to be accommodated. The improvements that have been identified are not definitive or exhaustive, given that they will need to be re-evaluated and confirmed through more detailed analysis and design;
- Appropriate agreement will need to be sought with DfI and the Parish of St. Helier, as the Highway Authorities responsible for the road network;
- This Technical Note does not deal in detail with the potential impact of permitted and committed developments that could affect the local highway network and parking capacity surrounding the proposed development. Further guidance from DfI will be sought to address what are felt to be influential developments; and
- Some improvements may only be deliverable with third party land acquisition or cooperation from third parties (e.g. Liberty Bus).
- Road closures associated with construction having a significant impact on the local network. Consideration to construction conditions to be made to ensure construction is undertaken to avoid/minimise quantity and extent of these closures.

5.2 Opportunities

- The off-site transport provisions associated are likely to achieve spin-off benefits for local communities and the wider travelling public in terms of accessibility and place making.
- Off-site transport provisions can contribute towards wider strategic transport targets including modal shift towards active travel modes.

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