

Appendix M-1

Cumulative Waste Assessment Calculations

Appendix M-1 Cumulative Waste Assessment

There are a number of existing and planned developments located close to the proposed development which have the potential to result in cumulative effects which are detailed in Table M1. Only the cumulative effects of construction have been assessed as there are no other committed healthcare developments that would generate clinical waste during operation.

Of the committed developments, those planned developments relevant to this waste assessment are summarised in Table M1 below.

Table M1: Planned developments identified for the cumulative effects assessment

Committed Development & Planning Ref.	Development Type	Likely cumulative effects
J1 Esplanade P/2011/0817 and RC/2016/1027	Demolish existing buildings. Construct eight storey building comprising of retail units and offices with basement parking. 24,877 m ² new office development.	The J1 Esplanade development has been included in the cumulative construction waste assessment due to the construction waste that would be generated. It is assumed that this committed development would be constructed over a 5 year period.
35 Commercial Street P/2016/1216	Demolish warehouse and construct a five storey and a six storey office building with parking. 5,235m ² new office development.	The 35 Commercial Street development has been included in the cumulative construction waste assessment due to the construction waste that would be generated. It is assumed that this committed development would be constructed over a 5 year period.
27 Esplanade & 3 / P/2011/0647	Refurbishment and demolition of existing buildings. Construct new seven-storey	The 27 Esplanade development has been included in the cumulative construction waste assessment due to the construction waste that would be generated. It is assumed that this committed development would be constructed over a 5 year period.

	<p>office building and parking.</p> <p>9,466m² new office development.</p>	
22/23 Esplanade P/2012/1344 -	<p>Demolish existing buildings.</p> <p>Construct six storey office building to include parking. 3,576m² new office development.</p>	<p>The 22/23 Esplanade development has been included in the cumulative construction waste assessment due to the construction waste that would be generated. It is assumed that this committed development would be constructed over a 5 year period.</p>
5/6 Esplanade P/2013/144	<p>Strip existing natural slate roof, insulate and re-clad in natural slate.</p>	<p>The 5/6 Esplanade development would generate demolition and construction waste. However it has not been included in the cumulative construction waste assessment as it is not feasible to undertake a waste forecast for a refurbishment project.</p>
Jersey International Finance Centre - Building 5 P/2014/2192 -	<p>Construct office building with car parking. 6,804m² new office development.</p>	<p>The Jersey International Finance Centre Building 5 development has been included in the cumulative construction waste assessment due to the construction waste that would be generated. It is assumed that this committed development would be constructed over a 10 year period.</p>
Esplanade Quarter (Building 1) – P/2013/0993	<p>Construct office block with car parking. 11,084m² new office development.</p>	<p>The Esplanade Quarter Building 1 development has been included in the cumulative construction waste assessment due to the construction waste that would be generated. It is assumed that this committed development would be constructed over a 10 year period.</p>
Esplanade Quarter (Public Car Park) – P/2013/1209	<p>Construct 520 space car park. 14,506m² car</p>	<p>The Esplanade Quarter Car Park development has been included in the cumulative construction waste assessment due to the construction waste that would be generated. It is assumed that this committed</p>

	park development.	development would be constructed over a 10 year period.
Jersey International Finance Centre – Buildings 2, 3 and 6	Commercial - office	The Jersey International Finance Centre – Buildings 2, 3 and 6 development would generate construction waste. However it has not been included in the cumulative construction waste assessment as it is not feasible to undertake a waste forecast as there is inadequate information available as the development has not yet been submitted to planning.
Jersey International Finance Centre – Building 4 P/2012/1141	Commercial	The Jersey International Finance Centre – Building 4 development would generate construction waste. However the development has not been included in the cumulative construction waste assessment as construction is complete.
Zephyrus P/2009/1462 and RC/2014/2002	59 apartments	The Zephyrus development has been included in the cumulative construction waste assessment due to the construction waste that would be generated. It is assumed that this committed development would be constructed over a 5 year period.
Westwater, P/2006/1989 and RC2014/2001	11 apartments	The Westwater development has been included in the cumulative construction waste assessment due to the construction waste that would be generated. It is assumed that this committed development would be constructed over a 5 year period.
Castle Quays 2, RP/2011/1101 and RC/2015/1335	Office space (500m ²), retail (1,000m ²), café & restaurant (300m ²) and 280 apartments.	The Castle Quays 2 development has been included in the cumulative construction waste assessment due to the construction waste that would be generated. It is assumed that this committed development would be constructed over a 5 year period.
Sunnyside Gardens, P/2017/0414	40 residential units, commercial (350m ²)	The Sunnyside Garden development has been included in the cumulative construction waste assessment due to the construction waste that would be generated. It is assumed that this committed development would be constructed over a 5 year period.
Metals Recycling Facility, La	Waste	The Metals Recycling Facility development would generate construction waste. However it has not been included in the cumulative construction waste

Collette, P/2017/0580		assessment as it is not feasible to undertake a waste forecast for a waste infrastructure project using existing benchmarking data.
Bellozanne Sewage Treatment Works	Wastewater	The Bellozanne Sewage Treatment Works development would generate construction waste. However it has not been included in the cumulative construction waste assessment as it is not feasible to undertake a waste forecast for a wastewater infrastructure project using existing benchmarking data.
Jersey Gas Co Site, PP/2016/1414	Gas	The Jersey Gas Co Site development would generate construction waste. However it has not been included in the cumulative construction waste assessment as it is not feasible to undertake a waste forecast for a gas infrastructure project using existing benchmarking data.
Summerland Factory, Broadcasting House and Thorpe House PP/2012/0832	87 residential units	The Summerland Factory development has been included in the cumulative construction waste assessment due to the construction waste that would be generated. It is assumed that this committed development would be constructed over a 5 year period.
La Collette Flats, PP/2015/0747	147 residential units	The La Collette Flats development has been included in the cumulative construction waste assessment due to the construction waste that would be generated. It is assumed that this committed development would be constructed over a 5 year period.
Westmount Quarry RP/2016/0538	242 residential units	The Westmount Quarry development has been included in the cumulative construction waste assessment due to the construction waste that would be generated. It is assumed that this committed development would be constructed over a 5 year period.

BOA site	174 residential units	The BOA development has been included in the cumulative construction waste assessment due to the construction waste that would be generated. It is assumed that this committed development would be constructed over a 5 year period.
Ann Street Brewery	15 new residential units	The Ann Street Brewery development has been included in the cumulative construction waste assessment due to the construction waste that would be generated. It is assumed that this committed development would be constructed over a 5 year period.
Premier Inn Hotel	91 bedrooms	The Premier Inn Hotel development has been included in the cumulative construction waste assessment due to the construction waste that would be generated. It is assumed that this committed development would be constructed over a 5 year period.
5-6 Esplanade P/2013/1144	Commercial – Office 4,308m ² new office development	The 5-6 Esplanade development has been included in the cumulative construction waste assessment due to the construction waste that would be generated. It is assumed that this committed development would be constructed over a 5 year period.
9 Castle Street P/2017/1369	Commercial – office 1,148m ² new office development	The 9 Castle Street development has been included in the cumulative construction waste assessment due to the construction waste that would be generated. It is assumed that this committed development would be constructed over a 5 year period.
UBS P/2017/1004	Residential 25 No. one bed and 2 No. two bed apartments	The UBS development has been included in the cumulative construction waste assessment due to the construction waste that would be generated. It is assumed that this committed development would be constructed over a 5 year period.
72, 74, 76 Great Union Road P/2017/0927	Residential 5 No. one bed and 8 No. two bed apartments	The 72, 74, 76 Great Union Road development has been included in the cumulative construction waste assessment due to the construction waste that would be generated. It is assumed that this committed development would be constructed over a 5 year period.

Demolition and excavation waste estimated to arise from the proposed development have both been included in the assessment. It has not been feasible to source or forecast the quantities of demolition or excavation waste for the other planned developments, with the exception of the Westaway Court Development where it has possible to estimate demolition waste due to the availability of key project information.

The cumulative construction waste forecast to be generated and the expected recycling, recovery and disposal performance has been compared to the waste infrastructure available in Jersey¹.

Based on waste management performance in Jersey it is assumed that:

- 70% of cumulative construction waste from the proposed and planned developments would be recycled at CD&E facilities on Jersey;
- 25% of cumulative construction waste from the proposed and planned developments would be recovered at the Jersey EfW facility at La Collette; and
- 5% of cumulative construction waste from the proposed and planned developments would be disposed at the reclamation site at La Collette.

The estimated quantities of waste estimated to be generated from the construction phases from the proposed and planned developments are summarised in Table M2 below.

Table M2: Cumulative construction waste quantities

Year	Construction Waste (tonnes)
2018	6,000
2019	76,039
2020	5,758
2021	5,758
2022	64,030
2023	1,188

¹ States of Jersey (2011) States of Jersey Island Plan 2011 Waste Management

Year	Construction Waste (tonnes)
2024	1,188
2025	4,807
2026	23,067

Construction Waste Recycling Capacity

The estimated cumulative construction waste that would be recycled has been compared to the construction and demolition recycling capacity in Jersey. The results are shown in Table M3 below.

Table M3: Recycling Capacity in Jersey

Year	Construction Waste (tonnes)	Construction Waste Recycled (tonnes)	Recycling Capacity within Jersey (tonnes)	% Recycling Capacity
2018	6,000	4,237	350,000	1.2
2019	76,039	65,325	350,000	18.7
2020	5,758	4,031	350,000	1.2
2021	5,758	4,031	350,000	1.2
2022	64,030	53,016	350,000	15.1
2023	1,188	4,224	350,000	1.2
2024	1,188	832	350,000	0.2
2025	4,807	4,380	350,000	1.3
2026	23,067	17,486	350,000	5

The annual estimated tonnage of cumulative construction waste sent for recycling generated from the proposed and planned developments is a maximum of 18.7 % of the recycling capacity in Jersey.

Construction Waste Recovery Capacity

The estimated cumulative construction waste that would be recovered has been compared to the recovery capacity in Jersey. The results are shown in Table M4 below.

Table M4: Recovery Capacity in Jersey

Year	Construction Waste (tonnes)	Construction Waste Recovered (tonnes)	Recovery Capacity within Jersey (tonnes)	% Recovery Capacity
2018	6,000	1,446	105,000	1.4
2019	76,039	6,158	105,000	5.9
2020	5,758	1,430	105,000	1.4
2021	5,758	1,440	105,000	1.4
2022	64,030	6,956	105,000	6.6
2023	1,188	297	105,000	0.3
2024	1,188	297	105,000	0.3
2025	4,807	1,202	105,000	1.1
2026	23,067	5,767	105,000	5.5

The annual estimated cumulative tonnage of construction waste suitable for recovery would be 6.6% of the recovery capacity in Jersey.

Construction Waste Disposal Capacity

The cumulative construction waste forecast to require disposal has also been compared to the landfill capacity in Jersey. The results are shown in Table M5 below.

Table M5: Disposal Capacity in Jersey

Year	Construction Waste (tonnes)	Construction Waste Disposed (tonnes)	Disposal Capacity within Jersey (tonnes)	% Disposal Capacity
2018	6,000	298	108,000	0.3
2019	76,039	3,730	108,000	3.5

Year	Construction Waste (tonnes)	Construction Waste Disposed (tonnes)	Disposal Capacity within Jersey (tonnes)	% Disposal Capacity
2020	5,758	319	108,000	0.3
2021	5,758	307	108,000	0.3
2022	64,030	3,120	108,000	2.9
2023	1,188	92	108,000	0.1
2024	1,188	92	108,000	0.1
2025	4,807	454	108,000	0.4
2026	23,067	1,098	108,000	1

The annual estimated tonnage of cumulative construction waste sent for disposal generated from the proposed and planned developments would be a maximum of 3.5% of the landfill capacity in Jersey.

Summary

It is assessed that the cumulative construction waste requiring removal off-site for recycling would produce a severe effect on the recycling capacity in Jersey (18.7% in 2019 and 15.1% in 2022). This represents a significant proportion of the available recycling capacity in Jersey. However, this effect can be mitigated due to the temporary nature of the demolition and excavation waste generated by the proposed development.

It is assessed that the cumulative construction waste requiring removal off-site for recovery would produce a major effect on the recovery capacity in Jersey (6.6% in 2022). This represents a significant proportion of the recovery capacity in Jersey. However this effect can be mitigated due to the temporary nature of the demolition waste generated by the proposed development and the availability of capacity at the EfW recovery facility.

It is assessed that the cumulative construction waste requiring removal off-site for disposal would produce a moderate effect on the disposal capacity in Jersey (3.5% in 2019). This represents a significant proportion of the disposal capacity in Jersey.

Therefore the significance of the predicted effects of cumulative construction waste generated by the proposed development are assessed to be severe and temporary.

The cumulative effects of construction waste are likely to be more significant than those for the Proposed Development alone.

Mitigation from cumulative construction

Early contact with waste management contractors and facilities will need to be made to notify them of the potential quantities and timings construction waste that could be generated from the Proposed Developments and the Planned Developments to ensure they can plan and manage the waste appropriately.

Residual effects from cumulative construction

The residual effects of cumulative construction waste generated by the proposed development and the planned developments will remain major and temporary.

Assumptions and Limitations

The quantity of waste likely to be generated from the construction of the Cumulative developments has been estimated using BRE SMARTWaste data², based on the floor areas of the proposed buildings. The data used has been collected via the SMARTWaste tool since 2008 and provides benchmark waste generation data for completed projects, for a range of different types of projects. This is considered the best data to use for the estimation of construction waste generation.

The floor areas of the planned developments have been obtained States of Jersey planning applications³.

The floor area for residential apartments in the planned developments has been estimated using a benchmark of 56.9m² based on the average floor area for an apartment in England⁴. The England average floor area was used as it was not possible to obtain a benchmark for Jersey apartments.

The demolition waste generated by the Westway Court have been estimated using the volume of the existing structures. This volume was input into the Demolition Waste Calculator in the WRAP Net Waste Tool (nwtool.wrap.org.uk) to estimate the quantity and composition of demolition waste.

The estimated density of demolition waste has been converted to volume using a conversion factor of 0.87 tonnes per cubic metre developed by WRAP⁵.

² Buildings Research Establishment (BRE) (2012) BRE Waste Benchmark Data 2012.

³ States of Jersey (2017) Current Planning Applications

⁴ WRAP (2014) Construction, demolition and excavation waste volume to mass conversion factors and List of Waste codes used in WRAP's tools

⁵ WRAP (2014) Construction, demolition and excavation waste volume to mass conversion factors and List of Waste codes used in WRAP's tools

Table M6 below displays the cumulative construction waste generated from the proposed and planned developments.

Table M6: Estimated cumulative construction waste

Year	Development	Waste (tonnes)
2018	Future Jersey Hospital	626
	J1 Esplanade	1,184
	35 Commercial Street	253
	27 Esplanade	451
	22/23 Esplanade	170
	Esplanade Quarter (Building 1)	264
	Esplanade Quarter (Building 5)	162
	Esplanade Quarter (Public Car Park)	102
	Zephyrus	113
	Westwater development	21
	Castle Quays 2	627
	Sunnyside Gardens	93
	Summerland Factory	166
	La Collette Flats	281
	Westmount Quarry	463
	BOA Site	333
	Ann Street Brewery	29
	Premier Inn Hotel	326
	5-6 Esplanade	205
	9 Castle Street	55
UBS	52	
72, 74, 76 Great Union Road	25	

Sub-total	6,000
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Year	Development	Waste (tonnes)
2019	Future Jersey Hospital	70,066
	J1 Esplanade	1,184
	35 Commercial Street	253
	27 Esplanade	451
	22/23 Esplanade	170
	Esplanade Quarter (Building 1)	264
	Esplanade Quarter (Building 5)	162
	Esplanade Quarter (Public Car Park)	102
	Zephyrus	113
	Westwater development	21
	Castle Quays 2	627
	Sunnyside Gardens	93
	Summerland Factory	166
	La Collette Flats	281
	Westmount Quarry	463
	BOA Site	333
	Ann Street Brewery	29
	Premier Inn Hotel	326

	5-6 Esplanade	205
	9 Castle Street	55
	UBS	52
	72, 74, 76 Great Union Road	25
Sub-total		76,039
Year	Development	Waste (tonnes)
2020	Future Jersey Hospital	385
	J1 Esplanade	1,184
	35 Commercial Street	253
	27 Esplanade	451
	22/23 Esplanade	170
	Esplanade Quarter (Building 1)	264
	Esplanade Quarter (Building 5)	162
	Esplanade Quarter (Public Car Park)	102
	Zephyrus	113
	Westwater development	21
	Castle Quays 2	627
	Sunnyside Gardens	93
	Summerland Factory	166
	La Collette Flats	281
	Westmount Quarry	463
	BOA Site	333
	Ann Street Brewery	29
Premier Inn Hotel	326	

	5-6 Esplanade	205
	9 Castle Street	55
	UBS	52
	72, 74, 76 Great Union Road	25
Sub-total		5,758
Year	Development	Waste (tonnes)
2021	Future Jersey Hospital	385
	J1 Esplanade	1,184
	35 Commercial Street	253
	27 Esplanade	451
	22/23 Esplanade	170
	Esplanade Quarter (Building 1)	264
	Esplanade Quarter (Building 5)	162
	Esplanade Quarter (Public Car Park)	102
	Zephyrus	113
	Westwater development	21
	Castle Quays 2	627
	Sunnyside Gardens	93
	Summerland Factory	166
	La Collette Flats	281
	Westmount Quarry	463
	BOA Site	333

	Ann Street Brewery	29
	Premier Inn Hotel	326
	5-6 Esplanade	205
	9 Castle Street	55
	UBS	52
	72, 74, 76 Great Union Road	25
Sub-total		5,758
Year	Development	Waste (tonnes)
2022	Future Jersey Hospital	58,656
	J1 Esplanade	1,184
	35 Commercial Street	253
	27 Esplanade	451
	22/23 Esplanade	170
	Esplanade Quarter (Building 1)	264
	Esplanade Quarter (Building 5)	162
	Esplanade Quarter (Public Car Park)	102
	Zephyrus	113
	Westwater development	21
	Castle Quays 2	627
	Sunnyside Gardens	93
	Summerland Factory	166
	La Collette Flats	281
	Westmount Quarry	463
	BOA Site	333
	Ann Street Brewery	29

	Premier Inn Hotel	326
	5-6 Esplanade	205
	9 Castle Street	55
	UBS	52
	72, 74, 76 Great Union Road	25
Sub-total		64,030
Year	Development	Waste (tonnes)
2023	Future Jersey Hospital	661
	Esplanade Quarter (Building 1)	264
	Esplanade Quarter (Building 5)	162
	Esplanade Quarter (Public Car Park)	102
Sub-total		1,188

Year	Development	Waste (tonnes)
2024	Future Jersey Hospital	661
	Esplanade Quarter (Building 1)	264
	Esplanade Quarter (Building 5)	162
	Esplanade Quarter (Public Car Park)	102
Sub-total		1,188
Year	Development	Waste (tonnes)
2025	Future Jersey Hospital	4,279

	Esplanade Quarter (Building 1)	264
	Esplanade Quarter (Building 5)	162
	Esplanade Quarter (Public Car Park)	102
Sub-total		4,807
Year	Development	Waste (tonnes)
2026	Future Jersey Hospital	22,539
	Esplanade Quarter (Building 1)	264
	Esplanade Quarter (Building 5)	162
	Esplanade Quarter (Public Car Park)	102
Sub-total		23,067

Appendix M-2

Cumulative TVIA

Appendix M-2 Cumulative Townscape and Visual Effects

Introduction

- 12.1 This part of the assessment looks at the potential for additional effects on the townscape or on visual amenity, over and above those reported in the main assessment, as a result of the effects associated with the proposed JFH combining with those from other planned or consented projects.
- 12.2 Cumulative landscape or townscape effects impact on either the physical fabric or character of the landscape/townscape, or any special values attached to it (SNH, 2012).
- 12.3 Cumulative visual effects can be caused by combined visibility, which occurs where the observer is able to see two or more developments from one viewpoint, and/or where sequential effects may occur as the observer moves between viewpoints (SNH, 2012).

Study area

- 12.4 In view of the urban context of the JFH sites, and of the cumulative schemes, the potential for cumulative visual effects to occur is relatively limited. The scale of the Urban Character Areas included in the assessment of direct effects above is such that any cumulative effects on townscape character would be confined to the same UCAs as have been considered in the main assessment.
- 12.5 Due to the 4.7km distance to Noirmont, the lack of large-scale cumulative projects in the intervening St Aubin's Bay area, and the urban nature of the context, it is highly unlikely that there would be any significant cumulative townscape or visual effects experienced beyond the core study area in St Aubin's, Beaumont, First Tower, or Noirmont. These settlements, together with the area beyond the Core Study Area, have been scoped out.
- 12.6 The cumulative assessment therefore focussed initially on the same 1.5km Core Study Area as the main assessment.

Approach

- 12.7 Within the Core Study Area, the cumulative schemes were further sifted on the basis of their relationship to the Urban Character Areas and the likelihood that they would either be inter-visible with the JFH or have the potential to affect the same views or receptors to a significant degree.
- 12.8 As a result, only those schemes located within the same UCA as the JFH development, or within adjoining UCAs, have been considered. Cumulative schemes that will have no inter-visibility (e.g. the Bellozanne Sewage Treatment Works) or which are sufficiently distant from the JFH development as to be unlikely to appear in the same field of view or, if visible, to be inconspicuous, have been excluded.
- 12.9 It should be noted that this is a purely qualitative assessment; no cumulative versions of the visualizations have been prepared. Neither has detailed fieldwork been

undertaken in relation to the cumulative schemes since the previous JFH application. This approach is considered to be proportionate for assessment purposes.

- 12.10 The cumulative projects included in this assessment are shown on Drawing C0423-ARP-XX-00-DR-PG-002 in Appendix A of ES Volume III. These have been consulted on and agreed with the States of Jersey.

Appraisal of Cumulative Schemes

- 12.11 Table M2.1 below identifies the main townscape and visual implications of the relevant cumulative schemes.

Table M2.1: Townscape and Visual Implications of Relevant Cumulative Schemes

Cumulative Scheme and Distance/ Direction from JFH	Urban Character Area	Change to Urban Fabric	New Visual Receptors	Visual Context
35 Commercial Street – 300m SE	The Parade and Esplanade	Demolition and replacement (usually taller) buildings	Office workers	Densely built-up; most views likely to be confined to immediate streetscape, but could influence views across town centre.
27 Esplanade/3 La Rue des Mielles – 250m SE				Primary views from The Esplanade and Castle Street; 7-storey block likely to be more widely visible as part of town centre skyline.
22/23 The Esplanade – 400m SE				Primary views from The Esplanade, with some potential to appear on skyline.
J1 Esplanade – 350m SE				Primary views from The Esplanade and Commercial St, but potential to appear as skyline feature (e.g. in the view from Fort Regent)
JIFC Building 1 – 100m S				Primary views from The Esplanade, La Route de la Libération, Les Jardins de la Mer and the promenade.

Zephyrus – 150m S	New Waterfront	New buildings on vacant site	Residents	Relatively exposed site with views from La Route de la Libération, Les Jardins de la Mer and the waterfront promenade.	
Public Car Park JIFC – 200m S		Landscape space replacing car park	Users of open space	Views mainly confined to The Esplanade, La Route de la Libération and surrounding buildings.	
JIFC Building 5 – 300m S		New building replacing car park	Office workers	As above, plus likely to be visible in wider views (e.g. from Fort Regent).	
Westwater – 400m SW		New building on vacant site	Residents + office workers	Residents	Exposed site with views from The Esplanade, promenade, marina, bay and Elizabeth Castle.
Castle Quays 2 – 550m S				Residents + office workers	Primary views from the marina, promenade, bay and Elizabeth Castle.
Premier Inn – 300m SE	Town Centre Core	Demolition and replacement building	Hotel guests	Primary views from York St and nearby streets; some potential to appear as skyline feature.	
Westmount Quarry – 300m NW	Town Edges and Slopes	Buildings replacing depot	Residents	Prominent site on higher ground forming backcloth to views across the town centre from the SE.	
Summerland Factory etc – 100m N (from Westaway Court)		Demolition and replacement buildings	Residents	Primary views from Rouge Bouillon and surrounding properties; potential to appear in views across the town, particularly from elevated locations to the N and W (e.g. Almorah Crescent).	

Commentary

12.12 The main townscape and visual implications of the cumulative schemes may be summarized as follows:

- Most of the schemes are located within The Parade and Esplanade character area (the same as the JFH development) and the New Waterfront character area, which adjoins it to the south.

- These schemes tend to be clustered in the vicinity of The Esplanade and towards the interface with the Town Centre Core.
- They are primarily commercial developments involving the demolition of existing buildings and their replacement with new buildings typically of 5-7 storeys.
- The developments to the south of The Esplanade, however, will take place on open sites, typically former parking areas.
- Their visual influence will mainly extend along nearby streets, especially The Esplanade, although taller developments are likely to appear as skyline features in more distant views across the town (e.g. from Fort Regent).
- Two further developments within the New Waterfront character area are located close to the marina and will complement existing developments such as Castle Quay 1. This is a visually exposed area with long-distance views across the bay and to/from Elizabeth Castle.
- Of the two developments within the Town Edges and Slopes character area, that at Summerland Factory is located a short distance to the north of Westway Court, is likely to be seen in the same field of view and has the potential to affect some of the same receptors. The development at Westmount Quarry is likely to be relatively prominent and to be seen in the background of views towards the JFH development from the south-east.
- The developments within the New Waterfront and Town Edges and Slopes character areas will introduce new residential receptors, who are assumed to be of high sensitivity to visual change.

Construction Phase

- 12.13 For assessment purposes it has been assumed that the cumulative schemes may be under construction at the same time as the JFH development. This scenario is highly unlikely to apply and represents a very worst-case assumption. As with the main assessment, the construction effects are assumed to be adverse.

Townscape Effects

- 12.14 The main sources of cumulative effects on townscape will be the combined impact of demolitions and visual intrusion into streetscapes (by hoardings, traffic etc) and longer-distance views (by taller plant such as tower cranes). The implications for the receptors which the main assessment predicts would be significantly affected are as follows:
- The Parade and Esplanade Character Area: No change from **Substantial Adverse**, since the cumulative schemes are located close to its southern perimeter and are of demonstrably smaller scale than the JFH;

- Elizabeth Castle: Potential for the effect on its setting to increase from Moderate to **Moderate to Substantial Adverse**, due to the clustering of tower cranes, particularly within the New Waterfront character area;
- Listed and Unlisted Hospital Buildings: No change from **Substantial and Very Substantial Adverse** respectively, due to the degree of separation from the cumulative schemes;
- Opera House: No change from **Substantial Adverse**, although the nearest cumulative scheme (JIFC Building 1) may intrude into its setting);
- Parade Gardens: No change from **Substantial Adverse**, due to its distance from the cumulative schemes; and
- Victoria Park: No change from **Substantial Adverse**, for the same reason.

12.15 Construction of the cumulative schemes is not anticipated to increase the predicted effects on other townscape receptors sufficiently to make them significant. However, some of the schemes are likely to give rise to notable effects in their own right; of particular relevance in this respect is Westmount Quarry, due to its prominent location, and the cluster of developments within the New Waterfront character area (although this area is considered to be of very low sensitivity).

Visual Effects

12.16 The implications for the receptors which the main assessment predicts would be significantly affected are as follows:

- Residents in Gloucester Street, The Parade, Elizabeth Place and Cheapside: No change from **Substantial Adverse**, since the cumulative schemes are either unlikely to be visible or would be seen at some distance;
- Residents in Savile Street and Rouge Bouillon: No change from **Substantial Adverse**; although construction of the Summerland Factory scheme may affect some of the same receptors, it would not be seen in the same field of view as construction of the JFH;
- Residents in St John's Road/Westmount Road: Potential change from Moderate to Substantial Adverse to **Substantial Adverse**, if construction of the Summerland Factory scheme is seen in the same field of view as JFH;
- Kensington Place: No change from **Substantial to Very Substantial Adverse**, since the cumulative schemes are unlikely to be visible; and
- Newgate Street: No change from **Very Substantial Adverse**, for the same reason.

12.17 Construction of the cumulative schemes is not anticipated to increase the predicted effects on other visual receptors sufficiently to make them significant. However, some of the schemes are likely to give rise to notable effects in their own right; of particular relevance in this respect is Summerland Factory, due to the likelihood that it will be overlooked from surrounding residential streets, and the cluster of developments within the New Waterfront character area, due to the sensitivity of views from locations such as Elizabeth Castle.

Operational Phase

Townscape Effects

- 12.18 The principal impact of the cumulative schemes once completed will be to introduce new buildings into the townscape, either onto open sites (mainly to the south of The Esplanade) or to replace existing development. In both cases, these buildings will typically be of larger scale than the traditional built fabric, but consistent with development trends in recent years (particularly along The Esplanade and the New Waterfront).
- 12.19 The overall effect of this change will be to create a townscape that is more resilient to ongoing development, due to its enhanced scale and the greater influence of modern architecture. At the same time, the visual contrast with vernacular buildings and smaller-scale streetscapes will increase.
- 12.20 The implications for the receptors which the main assessment predicts would be significantly affected are as follows:
- The Parade and Esplanade Character Area: No change from **Moderate to Substantial Neutral**, since the cumulative schemes are located close to its southern perimeter and are of demonstrably less influential than the JFH development;
 - Elizabeth Castle: Potential for the effect on its setting to increase from **Moderate to Substantial Neutral** to **Moderate to Substantial Adverse**, due to the introduction of more development of substantial scale within the waterfront setting of this landmark;
 - Listed and Unlisted Hospital Buildings: No change from **Moderate Beneficial**, due to their degree of separation from the cumulative schemes;
 - Opera House: No change from **Moderate to Substantial Neutral**; although the nearest cumulative scheme (JIFC Building 1) may intrude into its setting, it will not affect the key views towards its street frontage;
 - Parade Gardens: No change from **Moderate to Substantial Beneficial**, since the cumulative schemes are well removed from this space; and
 - Victoria Park: No change from **Moderate Neutral**, for the same reason.
- 12.21 The cumulative schemes are not anticipated to increase the predicted effects on other townscape receptors sufficiently to make them significant. However, some of the schemes are likely to give rise to notable effects in their own right; of particular relevance in this respect is Westmount Quarry (due to its prominent location), the developments along The Esplanade and within the New Waterfront character area (although this is considered to be of very low sensitivity).

Visual Effects

- 12.22 Once complete, the cumulative schemes will introduce new buildings into a range of views, as well as new receptors, some of whom may experience views of the JFH development. Where new buildings occupy sites that are currently open, existing views may be obstructed.
- 12.23 As the analysis in Table 12.1 above indicates, the visual influence of the cumulative schemes embedded within the built-up area is likely to be confined to the surrounding streets, although taller buildings may well appear as skyline features (e.g. in views from Fort Regent). However, the visual influence of schemes located on the edge of the built-up area (e.g. within the New waterfront), or in elevated positions (e.g. Westmount Quarry), will be more extensive.
- 12.24 The implications for the receptors which the main assessment predicts would be significantly affected are as follows:
- Residents in Gloucester Street: No change from **Substantial Neutral**, since the cumulative schemes are unlikely to be visible;
 - Residents in Savile Street and Rouge Bouillon: No change from **Moderate to Substantial Adverse**; although dual-aspect properties may also experience views of the Summerland Factory scheme, it would not be seen in the same field of view as the JFH;
 - Residents in The Parade, Elizabeth Place and Cheapside: No change from **Substantial Beneficial**, since the cumulative schemes are unlikely to be visible;
 - Residents in St John's Road/Westmount Road: Potential change from **Moderate to Substantial Neutral** to **Moderate to Substantial Adverse**, if the Summerland Factory scheme is prominent within the same field of view as the JFH;
 - Kensington Place: No change from **Substantial to Very Substantial Adverse**, since the cumulative schemes are unlikely to be visible;
 - Newgate Street: No change from **Very Substantial Adverse**, for the same reason; and
 - Users of Parade Gardens: No change from **Moderate to Substantial Beneficial**, since the cumulative schemes are unlikely to be visible.
- 12.25 The cumulative schemes are not anticipated to increase the predicted effects on other visual receptors sufficiently to make them significant, or to downgrade any significant effects (by obstructing views). However, some of the schemes are likely to give rise to notable effects in their own right; of particular relevance in this respect are the developments along The Esplanade (which will give rise to a sequence of effects for users of this thoroughfare) and within the New Waterfront character area (which will affect views from Elizabeth Castle and from the promenade to the west).

Summary

- 12.26 With the addition of the cumulative schemes, the significance of most of the effects will remain as predicted for the JFH development alone. This reflects both the substantially larger scale of the JFH, and hence its greater potential to affect townscape and views, and the degree to which the cumulative schemes are separated from it.
- 12.27 During the construction phase, assuming that the cumulative schemes are built at the same time as JFH, the significance of the effects on the following receptors could change:
- Elizabeth Castle: Potential for the effect on its setting to increase from Moderate to **Moderate to Substantial Adverse**, due to the clustering of tower cranes, particularly within the New Waterfront character area; and
 - Residents in St John's Road/Westmount Road: Potential change from Moderate to Substantial Adverse to **Substantial Adverse**, if the Summerland Factory scheme is prominent within the same field of view as the JFH.
- 12.28 With completion of JFH and the cumulative schemes, the significance of the effects on the following receptors could change:
- Elizabeth Castle: Potential for the effect on its setting to increase from **Moderate to Substantial Neutral** to **Moderate to Substantial Adverse**, due to the introduction of more development of substantial scale within the waterfront setting of this landmark; and
 - Residents in St John's Road/Westmount Road: Potential change from Moderate to Substantial Neutral to **Moderate to Substantial Adverse**, if the Summerland Factory scheme is prominent within the same field of view as the JFH.