

19 Inter-relationships and Cumulative Effects

19.1 Introduction

19.1.1 This ES Chapter assesses inter-relationships and cumulative effects, specifically:

- The inter-relationships that occur between the individual environmental effects of the proposed EfW CHP facility.
- The way that these effects of the EfW CHP facility have the potential to combine together to cause cumulative effects with one another at certain sensitive locations and lead to significant effects.
- The potential for effects of the EfW CHP facility to combine with effects from other proposed development projects in the vicinity and lead to significant effects.

19.2 Inter-relationships

19.2.1 Schedule 4, Part 1, Item 3 of the EIA Regulations requires an ES to include:

*“A description of the aspects of the environment likely to be significantly affected by the development, including, in particular, population, fauna, flora, soil, water, air, climatic factors, material assets, including the architectural and archaeological heritage, landscape **and the inter-relationship** between the above factors.”*

19.2.2 The preceding ES Chapters 7 to 18 each cover their respective environmental topics as follows:

7. Ecology and nature conservation.
8. Landscape and visual.
9. Cultural heritage.
10. Contamination – land and water quality.
11. Hydrology, hydrogeology and flood risk.
12. Traffic and transport.
13. Air quality.
14. Noise and vibration.
15. Construction waste.
16. Daylight, sunlight and overshadowing.
17. Socio-economics.
18. Health and wellbeing.

19.2.3 The inter-relationships between these topics and the way in which they are dealt with in this ES are detailed overleaf.

Ecology and Air Quality

- 19.2.4 Emissions from the stack have the potential to impact on designated ecological sites. The potential impacts are discussed in ES Chapter 7: Ecology and Nature Conservation and ES Chapter 13: Air Quality. However, the assessments conclude that there will not be significant effects in this regard.
- 19.2.5 Dust arising during construction has the potential to coat vegetation on the edges of Blackies Wood and the adjacent watercourse, although this would only be likely to occur over short periods, during dry weather, and when works are undertaken adjacent to the site boundary. Whilst ES Chapter 13: Air Quality deals with the amenity impacts of dust on the human environment, ES Chapter 7: Ecology and Nature Conservation concludes that any such dust effects would not be significant.

Ecology and Landscape

- 19.2.6 The existing landscape and the proposed Landscape Strategy, in particular the Blackies Wood component, have both a landscape amenity value and an ecological value. The landscape value of Blackies Wood has been considered intrinsically as part of the proposed landscaping scheme in Chapter 8: Landscape and Visual. The ecological value of the trees and other habitats on site is considered within Chapter 7: Ecology. The Landscape Strategy has been developed by the Landscape Architect in close association with the Ecologist. The workshop/stores building incorporates a brown roof which will provide suitable habitat for black redstarts and native shrubs / trees have been proposed to provide habitat for native species.

Ecology and Noise

- 19.2.7 Noise has the potential have an impact upon breeding and wintering birds.
- 19.2.8 Temporary noise disturbance from the construction activities has the potential to impact upon breeding and wintering birds of the Plymouth Sound and Estuaries SAC/SPA and Tamar Estuary (Tamar Tavy Estuary) SSSI, although these designated sites are approximately 600m distant at their closest. Furthermore, at present HMNB Devonport and the wider dockyard already generate noise from their facilities, and these activities are closer to these designated sites. Temporary noise disturbance from the construction also has the potential is likely to impact upon breeding and wintering birds within Blackies Wood. However, ES Chapter 7: Ecology and Nature Conservation concludes that any such effects would not be significant.
- 19.2.9 Permanent noise from the EfW CHP facility is not expected to impact upon breeding and wintering birds of the Plymouth Sound and Estuaries SAC located approximately 600m west, or other internationally and nationally-designated sites further afield. There may also be some breeding and/or wintering birds on the site. The propagation of noise from the facility has been modelled for the noise assessment. Furthermore, and as noted above, HMNB Devonport and the wider dockyard already generate noise at a number of locations from a number of activities, many of which are directly adjacent to the SAC. ES Chapter 7: Ecology and Nature Conservation concludes that any such effects would not be significant.

Ecology, Hydrology and Contamination

- 19.2.10 Two culverts are to be removed and replaced with a new clear-span bridge. This activity has the potential to impact upon the water environment, both the area where the watercourse is being crossed but also upstream and downstream. ES Chapters 7: Ecology and Nature Conservation,

10: Contamination – Land and Water Quality, and 11: Hydrology, Hydrogeology and Flood Risk, have each assessed the relevant impacts on the water environment. It has been concluded that with mitigation in place any potential effects in the form of sediment/silt run-off/mobilisation, contamination mobilisation or accidental spillage of hydrocarbons, chemicals, etc will be reduced to a minor level or less.

19.2.11 The fact that two culverts are to be replaced with one clear-span bridge means that there would be beneficial effects on ecology in this very localised area, considered to be of low significance.

Contamination and Construction Waste

19.2.12 ES Chapter 10: Contamination – Land and Water Quality, assesses the impact of the proposed development with respect to ground and groundwater contamination. In particular, it considers the potential effects of the disturbance of contamination and hazardous materials on human health and the environment, and the impacts of potentially contaminated ground or groundwater conditions on existing adjacent structures and the new development. ES Chapter 15: Construction Waste, considers wastes arising during the excavation, demolition and construction required to develop the EfW CHP facility. It seeks to quantify the amount of waste arising, as well as identify the different types of materials and how they will be managed. It therefore follows that contaminated land could be encountered which is considered to comprise waste requiring treatment and/or disposal. It is concluded in both ES Chapters that:

- Previous ground investigations at the site have not encountered significant concentrations of contaminated soils.
- It is expected that the majority of excavated material should be suitable for re-use across the site.
- If contamination is encountered during site works it should be reported to the Local Authority and may require remediation and/or collection by a specialised hazardous waste operator and subsequent disposal at a licensed facility.

Construction Waste and Ecology

19.2.13 Stands of Japanese knotweed have been found growing within Blackies Wood and on the slopes of Table Top Mountain (outwith the site boundary but adjacent to the construction compound). These stands will be treated and eradicated to halt the spread of this invasive species. This is acknowledged in both ES Chapter 7: Ecology and Nature Conservation and ES Chapter 15: Construction Waste.

Traffic, Air Quality and Noise

19.2.14 ES Chapter 12: Traffic and Transport quantifies existing traffic movements, makes projections of future traffic movements with the EfW CHP facility in place, and assesses traffic and transport impacts. Traffic data from ES Chapter 12 are then also used in ES Chapter 13: Air Quality and ES Chapter 14: Noise and Vibration.

19.2.15 ES Chapter 13: Air Quality assesses the impact of road traffic emissions on air quality at sensitive receptors. The predicted annual mean concentrations of nitrogen dioxide (NO₂) and particulate matter (PM₁₀) during the assessment years are compared against the respective Air Quality Objective Values. The potential combined impact of chimney emissions and road traffic emissions on annual mean concentrations of NO₂, PM₁₀ and PM_{2.5}, at sensitive receptors in close

proximity to the Camels Head junction and other local roads in the area were also predicted. In these areas baseline annual mean concentrations of NO₂ and particulate matter are elevated to concentrations that are higher than those found in locations further from major traffic routes. The predicted change in annual mean NO₂ concentrations, in the year of opening, in the area around Weston Mill Community Primary School and residential properties in the vicinity of the Camels Head junction as a result of the proposed development would be 1.3 µg/m³ or less. This is around 3% of the AQS and would represent a small change, giving an effect of negligible significance. The maximum predicted change in annual mean PM₁₀ and PM_{2.5} concentrations is 0.1 µg/m³, which is too small to give rise to a significant effect at any receptor.

- 19.2.16 ES Chapter 14: Noise and Vibration assesses the impact of road traffic on noise levels. Apart from the link between the on-site roundabout and the junction of Wolseley Road and Weston Mill Drive, the increases in noise level are all below 1 dB(A), the significance of which is assessed as negligible with reference to Table 14.5. The increase on the link between the on-site roundabout and the junction of Wolseley Road and Weston Mill Drive is 1.6 dB(A). However, there are no sensitive residential receptors adjacent to this link. The nearest residential properties front on to Wolseley Road and Weston Mill Drive and the noise climate at these properties is dominated by road traffic on these two links. Weston Mill Community Primary School is located on the eastern side of the Wolseley Road / Weston Mill Drive junction, but again the existing noise climate here is dominated by road traffic noise. The resultant increases in noise levels due to operational road traffic will be less than 1 dB(A) and the significance of these noise increases is assessed as negligible.

Landscape & Visual and Cultural Heritage

- 19.2.17 ES Chapter 8: Landscape and Visual identifies the Zone of Visual Influence (ZVI) (see Figure 8.12.3), which is the area within which it would be possible to see the proposed development. Many factors influence the ZVI including landform, intervening vegetation and buildings which can obscure views. Within the ZVI, a representative selection of viewpoints is identified and the visual impacts from them are assessed.
- 19.2.18 Although the principal study area for ES Chapter 9: Cultural Heritage is more closely confined to the site (see paragraphs 9.1.2 to 9.1.4), where Scheduled Monuments, Registered Parks & Gardens and Listed Buildings fall within the ZVI these have also been assessed.

Health and Wellbeing

- 19.2.19 ES Chapter 18 considers Health and Wellbeing effects. The principal focus is an assessment of health effects that have the potential to occur from exposure to atmospheric pollutants emitted by the EfW CHP facility and its traffic. However, ES Chapter 18 also considers perceived effects on peoples' wellbeing. Wellbeing is a broad concept with many varying definitions, the following being one published by the Department of Health (2009):

"A positive state of mind and body, feeling safe and able to cope, with a sense of connection with people, communities and the wider environment."

- 19.2.20 ES Chapter 18 therefore draws on other ES Chapters where these are perceived to have potential wellbeing effects, notably ES Chapter 14: Noise and Vibration.

19.3 Cumulative Effects

Types of Cumulative Effects

- 19.3.1 The EIA Regulations require that, if relevant, cumulative effects of development be considered within an ES. Schedule 4, Part 1, Item 4 of the EIA Regulations requires an ES to include:

“A description of the likely significant effects of the development on the environment, which should cover the direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the development, resulting from

(a) the existence of the development;

(b) the use of natural resources;

(c) the emission of pollutants, the creation of nuisances and the elimination of waste,

and the description by the applicant of the forecasting methods used to assess the effects on the environment.”

- 19.3.2 With the exception of ‘cumulative’ effects which are dealt with in this ES Chapter, all of the descriptive terms in the paragraph above are covered implicitly as appropriate in ES Chapters 7 to 18.

- 19.3.3 Draft good practice guidance on EIA (Department for Communities and Local Government, 2006) states that:

“ ‘Cumulative’ is not defined in the EIA Directive or Regulations – the dictionary definition is ‘increasing by one addition after another’...In the context of EIA, cumulative effects could refer to the combined effects of different development activities within the vicinity or those of different aspects of a single development on a particular receptor.” (paragraphs 121 and 122)

- 19.3.4 The following assessment therefore differentiates, using professional judgement, between:

- Individual effects of the EfW CHP facility that have the potential to combine together to cause cumulative effects with one another at certain sensitive locations and lead to significant effects.
- Effects of the EfW CHP facility that have the potential to combine with effects from other proposed development projects in the vicinity and lead to significant effects.

EfW CHP Facility Effects Combining With One Another

- 19.3.5 One of the key elements of the south west regional waste strategy (South West Regional Assembly, 2004) is to provide waste treatment facilities close to the larger urban centres. Within the SWDWP area the city of Plymouth has the greatest population and population density (see Table 5.4 in ES Chapter 5: Alternatives to the Proposed Development). It is therefore logical to locate a strategic EfW facility within or close to Plymouth. This principle is reflected in the SWDWP's Joint Municipal Waste Management Strategy (SWDWP, 2008) and in MVV's response by selecting a site within Plymouth. The principal reason behind MVV's decision to specifically select the North Yard site is because it provides a very significant opportunity to incorporate CHP into the facility from the outset by virtue of the existing steam network within Devonport Dockyard and the demand there for heat, which brings substantial sustainability benefits.
- 19.3.6 Such benefits need to be weighed against the consequential disadvantage that comes with this location, namely its location within a built-up area in proximity to residential properties and therefore the potential for impacts on local amenity. Of particular relevance to this discussion is Policy W7 of the Plymouth Waste Development Plan Document (Plymouth City Council, 2008):
- "Proposals for the development of strategic, large scale or local waste management facilities on sites not allocated in this development plan will be permitted, where they meet the following criteria:*
- 1. They are consistent with relevant waste planning policies and objectives, are compatible with the objective of moving the management of waste up the waste hierarchy, and do not compromise the achievement of recovery targets.*
 - 2. Priority will be given to the use of previously developed land. However, loss of greenfield land may be acceptable if it does not result in significant adverse impact on greenscape character or functions, if the impacts of the development can be adequately mitigated and if the development proposal otherwise performs well in relation to the other criteria of this policy.*
 - 3. They are compatible with their environmental setting and will not result in unacceptable impacts on important environmental, historic or cultural assets.*
 - 4. They will not result in unacceptable direct or indirect impacts on the residential amenity of existing or proposed communities, or unacceptable impacts on the amenity of other neighbouring uses that would be sensitive to waste management development.*
 - 5. They have good access to the principal road network which should have adequate capacity, or potential to have adequate capacity, to accommodate the transport movements associated with the proposal. Where practicable, they should have access to a choice of transport modes other than road.*
 - 6. The proposal does not have a significant conflict with other spatial planning objectives set out in the LDF, particularly in relation to urban regeneration, economic development, environmental improvement, and significant growth priorities."*
- 19.3.7 A full analysis of this and other planning policies can be found in the Planning Application Supporting Statement which accompanies the planning application.

- 19.3.8 The preceding ES Chapters 7 to 18 each cover their respective environmental topics, and together they are considered to provide sufficient information for a conclusion to be drawn in relation to Clause 3 of Policy W7.
- 19.3.9 For selected representative locations or groups of dwellings in closest proximity, Table 19.1 overleaf draws together the effects contained within ES Chapters 7 to 18 that are considered to comprise 'amenity' effects and considers them in cumulation to aid in drawing a conclusion in relation to Clause 4 of Policy W7.
- 19.3.10 In addition to Table 19.1, reference should also be made to the following Figures which provide useful context by illustrating how many properties are located in the vicinity of the proposed development:
- Figure 19.1: Diagram of Dwellings in Proximity to Main Building and Flue.
 - Figure 19.2: Diagram of Dwellings in Proximity to Inner Perimeter Fence.
 - Figure 19.3: Diagram of Dwellings in Proximity to All Built Structures.
 - Figure 19.4: Diagram of Dwellings with Visual Interface to Proposed Buildings.
- 19.3.11 Figures 19.1 to 19.3 have been produced in AutoCAD and GIS software, which shows in two dimensions the outline of the proposed development overlaid on an Ordnance Survey base map. In each of these three Figures, an outline is then drawn around certain parts of the development. Then, GIS software has been used to calculate the distances in 50m bandings up to 250m. The distances are measured in two dimensions not three dimensions, i.e. they do not take account of topography. If topography were to be taken into account, the distances to properties would be slightly further, certainly not nearer, so the distances are considered to be conservative.
- 19.3.12 Figure 19.4 has also been produced in AutoCAD software. The assessment of the perceived views from the properties, and whether they are direct, oblique and/or obscured, has been made using the professional judgement of the Landscape Architect that conducted the Landscape and Visual Assessment (ES Chapter 8).

Table 19.1: EfW CHP Facility Cumulative Amenity Effects at Selected Representative Locations or Groups of Dwellings

Assessment Topic	Talbot Gds	Savage Road (91-138)	Savage Road (1-30)	Poole Park Road (37-69)	Cardinal Avenue (86-128, even)	Wolseley Road (504-522, even)	Hamoaze Avenue (17-29)	Weston Mill Community Primary School
Visual Effects – During Construction	Visual effect will be major as the area of Table Top Mountain which is in direct view will be used for construction. This will cause significant deterioration in the existing view.	Viewpoint 3 (Talbot Gardens) may be considered partly representative, with the exception that properties on Talbot Gardens lie between the construction compound and numbers 91-138 Savage Road, lessening the visibility of the construction compound.	Visual effect will be moderate but not significant with majority of construction being concealed by the existing vegetation, however, tall cranes will be visible above this.	From upper storeys, cranes and upper reaches of the roof of the building will be visible. This is seen in the context of the backdrop of the existing dockyard. The wider panoramic views over the Tamar and Cornwall will be unaffected. Moderate but not significant deterioration of the existing view.	Clear views from here onto the site due to the elevated location of these residences. Visual effect will be major / moderate change from the baseline, leading to noticeable and significant deterioration in the existing views.	During construction only the tall cranes will be (obliquely) visible. Moderate but not significant visual effect.	From rear upper storeys (only) of the dwellings at the northern end of this road, cranes and roof of building will be visible above the intervening railway embankment and fencing. This should be taken in the context of the existing wide views which face onto the Dockyard and distant Cornish landscape. Moderate but not significant visual effect.	Viewpoint 13b is considered representative. Intervening vegetation, buildings and viaduct in foreground would partially screen elements of the construction and the proposed buildings. Users will gain clear views however above the general horizon in the distance. Minor but not significant deterioration in existing view.
Visual Effects – Year 1 of Operation	Visual effect will be lower due to the oblique angle of the receptors to the completed building. Predominant views will remain the long distant panoramas across the Tamar estuary and Rame Peninsula. Therefore there would be a noticeable but not a significant deterioration in the existing view.	As above.	Building will be visible above existing vegetation and through the mitigation planting, this would be more exaggerated in winter. This will result in a major and significant adverse deterioration in the existing view. Proposed roadways and lower areas of the building would not be visible behind Blackies Wood.	From upper storeys, upper reaches of the roof of the building will be visible. This is seen in the context of the backdrop of the existing dockyard. The wider panoramic views over the Tamar and Cornwall will be unaffected. Moderate but not significant deterioration of the existing view.	Significant deterioration in the existing views.	Taller elements of the building and stack will be visible above the intervening vegetation and landform, leading to a moderate adverse but not significant deterioration in the existing views.	The limited number of properties that would see the facility would experience a noticeable but not significant deterioration in the existing views. At the lower floors, and for properties at the southern end of this road, views will remain unchanged of railings and railway embankment in immediate foreground.	As above.
Visual Effects – Year 15 of Operation	As above.	As above.	Mitigation planting will form a significant buffer to views which will result in a reduction in panoramic views but allow greatly reduced views of the development thus reducing the effect. Noticeable deterioration but not a significant deterioration in the existing view.	As above.	As above.	As above.	As above.	As above.

Assessment Topic	Talbot Gds	Savage Road (91-138)	Savage Road (1-30)	Poole Park Road (37-69)	Cardinal Avenue (86-128, even)	Wolseley Road (504-522, even)	Hamoaze Avenue (17-29)	Weston Mill Community Primary School
Traffic – During Construction	No traffic expected at this location.	No traffic expected at this location.	No traffic expected at this location.	No traffic expected at this location.	No traffic expected at this location.	There will be some additional traffic passing this location, although there are not expected to be significant amenity effects in this regard, particularly given the existing relatively high levels of traffic.	No traffic expected at this location.	There will be some additional traffic passing this location, although there are not expected to be significant amenity effects in this regard, particularly given the existing relatively high levels of traffic.
Traffic – Year 1 of Operation	No traffic expected at this location.	No traffic expected at this location.	No traffic expected at this location.	No traffic expected at this location.	No traffic expected at this location.	There will be some additional traffic passing this location, although there are not expected to be significant amenity effects in this regard, particularly given the existing relatively high levels of traffic.	No traffic expected at this location.	There will be some additional traffic passing this location, although there are not expected to be significant amenity effects in this regard, particularly given the existing relatively high levels of traffic.
Traffic – Year 15 of Operation	No traffic expected at this location.	No traffic expected at this location.	No traffic expected at this location.	No traffic expected at this location.	No traffic expected at this location.	There will be some additional traffic passing this location, although there are not expected to be significant amenity effects in this regard, particularly given the existing relatively high levels of traffic.	No traffic expected at this location.	There will be some additional traffic passing this location, although there are not expected to be significant amenity effects in this regard, particularly given the existing relatively high levels of traffic.
Air Quality – Dust During Construction	Impacts would be small under normal atmospheric conditions, producing an effect of negligible significance. Since these properties are within 100m of the main construction area (see Figure 13.1) they may experience an occasional increase in dust soiling rates during times when activities are carried out in extremely dry and windy weather. Any such impacts would be restricted to short-term episodes affecting a small number of properties at any one time, and would be of minor significance.	Impacts would be small under normal atmospheric conditions, producing an effect of negligible significance. Since these properties are within 100m of the main construction area (see Figure 13.1) they may experience an occasional increase in dust soiling rates during times when activities are carried out in extremely dry and windy weather. Any such impacts would be restricted to short-term episodes affecting a small number of properties at any one time, and would be of minor significance.	Impacts would be small under normal atmospheric conditions, producing an effect of negligible significance. Since these properties are within 100m of the main construction area (see Figure 13.1) they may experience an occasional increase in dust soiling rates during times when activities are carried out in extremely dry and windy weather. Any such impacts would be restricted to short-term episodes affecting a small number of properties at any one time, and would be of minor significance.	Not within 100m of main construction area so no dust effects expected.	Not within 100m of main construction area so no dust effects expected.	Not within 100m of main construction area so no dust effects expected.	Impacts would be small under normal atmospheric conditions, producing an effect of negligible significance. Since these properties are within 100m of the main construction area (see Figure 13.1) they may experience an occasional increase in dust soiling rates during times when activities are carried out in extremely dry and windy weather. Any such impacts would be restricted to short-term episodes affecting a small number of properties at any one time, and would be of minor significance.	Impacts would be small under normal atmospheric conditions, producing an effect of negligible significance. Since these properties are within 100m of the main construction area (see Figure 13.1) they may experience an occasional increase in dust soiling rates during times when activities are carried out in extremely dry and windy weather. Any such impacts would be restricted to short-term episodes affecting a small number of properties at any one time, and would be of minor significance.
Air Quality – Stack and Traffic Emissions During Operation	The combined impact of emissions to air from the chimney and operational traffic would not result in any significant effect at air quality sensitive receptors.	The combined impact of emissions to air from the chimney and operational traffic would not result in any significant effect at air quality sensitive receptors.	The combined impact of emissions to air from the chimney and operational traffic would not result in any significant effect at air quality sensitive receptors.	The combined impact of emissions to air from the chimney and operational traffic would not result in any significant effect at air quality sensitive receptors.	The combined impact of emissions to air from the chimney and operational traffic would not result in any significant effect at air quality sensitive receptors.	The combined impact of emissions to air from the chimney and operational traffic would not result in any significant effect at air quality sensitive receptors.	The combined impact of emissions to air from the chimney and operational traffic would not result in any significant effect at air quality sensitive receptors.	The combined impact of emissions to air from the chimney and operational traffic would not result in any significant effect at air quality sensitive receptors.

Assessment Topic	Talbot Gds	Savage Road (91-138)	Savage Road (1-30)	Poole Park Road (37-69)	Cardinal Avenue (86-128, even)	Wolseley Road (504-522, even)	Hamoaze Avenue (17-29)	Weston Mill Community Primary School
Noise – During Construction	For some construction activities, when working close to properties on Talbot Gardens, the noise limit values will be exceeded and significant effects will result. Where practicable, noise barriers, close in to construction works, when working in the vicinity of properties on Talbot Gardens, should be provided. This will reduce noise levels by approximately 5 dB(A), resulting in low or negligible significance for the majority of these works.	Receptors C1 and C2 considered partly representative, although they are closer to the construction site. Therefore, for some construction activities, when working close to properties on Talbot Gardens, the noise limit values will be exceeded and significant effects will result. Where practicable, noise barriers, close in to construction works, when working in the vicinity of properties on Talbot Gardens, should be provided. This will reduce noise levels by approximately 5 dB(A), resulting in low or negligible significance for the majority of these works.	Construction noise levels will be below the proposed limit values. The significance of effects is assessed as negligible / low.	Construction noise levels will be below the proposed limit values. The significance of effects is assessed as negligible / low.	Construction noise levels will be below the proposed limit values. The significance of effects is assessed as negligible / low.	Construction traffic noise would be negligible.	Construction noise levels will be below the proposed limit values. The significance of effects is assessed as negligible / low.	Construction traffic noise would be negligible.
Noise – Facility and Traffic Noise During Operation	With the comprehensive mitigation incorporated in the plant design, and the provision of a 3-metre high noise barrier to the on-site HGV route, the significance of operational noise effects is assessed as negligible / low.	With the comprehensive mitigation incorporated in the plant design, and the provision of a 3-metre high noise barrier to the on-site HGV route, the significance of operational noise effects is assessed as negligible / low.	With the comprehensive mitigation incorporated in the plant design, and the provision of a 3-metre high noise barrier to the on-site HGV route, the significance of operational noise effects is assessed as negligible / low.	With the comprehensive mitigation incorporated in the plant design, and the provision of a 3-metre high noise barrier to the on-site HGV route, the significance of operational noise effects is assessed as negligible / low.	With the comprehensive mitigation incorporated in the plant design, and the provision of a 3-metre high noise barrier to the on-site HGV route, the significance of operational noise effects is assessed as negligible / low.	With the comprehensive mitigation incorporated in the plant design, and the provision of a 3-metre high noise barrier to the on-site HGV route, the significance of operational noise effects is assessed as negligible / low.	With the comprehensive mitigation incorporated in the plant design, and the provision of a 3-metre high noise barrier to the on-site HGV route, the significance of operational noise effects is assessed as negligible / low.	With the comprehensive mitigation incorporated in the plant design, and the provision of a 3-metre high noise barrier to the on-site HGV route, the significance of operational noise effects is assessed as negligible / low.
Daylight	All of the windows assessed (including lounges, kitchens and bedrooms) comply with the BRE guidelines for ambient daylighting and none will experience a noticeable reduction in daylight.	Given that the other dwellings that were assessed comprise those most likely to have been impacted, it is concluded by reasonable inference that these dwellings will also comply with the BRE guidelines for ambient daylighting and none will experience a noticeable reduction in daylight.	All of the windows assessed (including lounges, kitchens and bedrooms) comply with the BRE guidelines for ambient daylighting and none will experience a noticeable reduction in daylight.	Given that the other dwellings that were assessed comprise those most likely to have been impacted it is concluded by reasonable inference that these dwellings will also comply with the BRE guidelines for ambient daylighting and none will experience a noticeable reduction in daylight.	Given that the other dwellings that were assessed comprise those most likely to have been impacted it is concluded by reasonable inference that these dwellings will also comply with the BRE guidelines for ambient daylighting and none will experience a noticeable reduction in daylight.	All of the windows assessed (including lounges, kitchens and bedrooms) comply with the BRE guidelines for ambient daylighting and none will experience a noticeable reduction in daylight.	All of the windows assessed (including lounges, kitchens and bedrooms) comply with the BRE guidelines for ambient daylighting and none will experience a noticeable reduction in daylight.	Given that the other dwellings that were assessed comprise those most likely to have been impacted it is concluded by reasonable inference that these dwellings will also comply with the BRE guidelines for ambient daylighting and none will experience a noticeable reduction in daylight.

Assessment Topic	Talbot Gds	Savage Road (91-138)	Savage Road (1-30)	Poole Park Road (37-69)	Cardinal Avenue (86-128, even)	Wolseley Road (504-522, even)	Hamoaze Avenue (17-29)	Weston Mill Community Primary School
Sunlight	All of the windows assessed will receive annual and winter sunlight levels above the BRE target levels. It is concluded that the scheme will not result in any unacceptable impacts in terms of annual and winter sunlighting.	Given that the other dwellings that were assessed comprise those most likely to have been impacted, it is concluded by reasonable inference that these dwellings will comply with the BRE guidelines for annual and winter sunlighting and none will experience unacceptable impacts.	All of the windows assessed will receive annual and winter sunlight levels above the BRE target levels. It is concluded that the scheme will not result in any unacceptable impacts in terms of annual and winter sunlighting.	Given that the other dwellings that were assessed comprise those most likely to have been impacted, it is concluded by reasonable inference that these dwellings will comply with the BRE guidelines for annual and winter sunlighting and none will experience unacceptable impacts	Given that the other dwellings that were assessed comprise those most likely to have been impacted, it is concluded by reasonable inference that these dwellings will comply with the BRE guidelines for annual and winter sunlighting and none will experience unacceptable impacts	All of the windows assessed will receive annual and winter sunlight levels above the BRE target levels. It is concluded that the scheme will not result in any unacceptable impacts in terms of annual and winter sunlighting.	All of the windows assessed will receive annual and winter sunlight levels above the BRE target levels. It is concluded that the scheme will not result in any unacceptable impacts in terms of annual and winter sunlighting.	Given that the other dwellings that were assessed comprise those most likely to have been impacted, it is concluded by reasonable inference that these dwellings will comply with the BRE guidelines for annual and winter sunlighting and none will experience unacceptable impacts
Cumulative Effects	No foreseen significant cumulative effects once the facility is operational. Throughout the construction period there would be a significant visual effect due to direct views over the construction compound. There may be short term occasions during construction when there are also dust and noise impacts, which for these short term periods could combine to cause significant cumulative effects for residents of Talbot Gardens, although this would not be unexpected for any construction project.	No foreseen significant cumulative effects once the facility is operational. There may be short term occasions during construction when there are dust and noise impacts, which for these short term periods could combine to cause significant cumulative effects for residents of 91-138 Savage Road, although this would not be unexpected for any construction project.	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.

EfW CHP Facility Effects in Cumulation with Other Proposed Developments

19.3.20 Other planned non-waste related developments within a reasonable proximity of the proposed EfW CHP facility have been identified through discussion with Plymouth City Council (PCC) officers. One of these developments has recently been granted planning permission, others are currently the subject of planning applications, some are the subject of pre-application discussions, and some are ideas for future proposals. It is necessary therefore to be mindful of the likelihood and timings of these developments taking place. It may in the future be appropriate for some of these developments to assess their respective environmental effects in cumulation with those of the EfW CHP facility; indeed the Devonport Landing Craft Co-location Project has done so. The list of other developments considered is as follows:

- Help for Heroes project, which is comprised of two elements, a disability-compliant accommodation block to the West of Drake Main Gate and a rehabilitation centre with therapeutic pool to the East of the Wyvern Sports Centre. The planning application for the accommodation block was submitted in February 2011 and unanimously approved by the Council on 7 April 2011, with construction due to start in October 2011. Submission of the planning application for the rehabilitation centre was made in April 2011. All Help for Heroes construction is due to be complete in October 2012.
- Devonport Landing Craft Co-location Project (DLCCP) planning application, to be located on land to the west of the site of the proposed EfW CHP Facility. The proposed scheme comprises a small marina, accommodation (offices and classrooms) housed within a new building in place of existing building W007, a new rock revetment at Wilson's Beach, as well as a new slipway, finger jetty, boat yard and new Engineering Facility at the western end of Weston Mill Lake. Capital dredging, and subsequent maintenance dredging, will be required at the locations of the proposed works. Wilson's Beach at the western end of Weston Mill Lake will be used more frequently for training purposes. The construction of the marina requires the existing 13 Wharf Pontoon arrangement to be reconfigured and will incorporate the recently constructed 14 Wharf Small Boat Facility. The engineering facility and boat yard will be arranged around the existing helipad safety zones and vehicle parking. Construction start is proposed for summer 2011 and approximately 16 months has been programmed for the construction period therefore aiming for project completion by winter 2012/13 (including some contingency time).
- A Naval Base Helicopter landing site is already located to the North West of Weston Mill Lake, which is used by both military and Flag Officer Sea Training sponsored civilian helicopters. The civilian contracted helicopters are based and maintained at Plymouth City Airport. Whilst there is no current intention to change the number of flights in the Naval Base, it is understood that the future of Plymouth City Airport is under review and the outcome has the potential to affect the Naval Base helicopter flights. It is understood therefore that increased helicopter movements have been the subject of pre-application discussion with Plymouth City Council's Development Management Department and Public Protection Service.
- Weston Mill District Centre, allocated in Plymouth's Local Development Framework Core Strategy (Strategic Objective 7(5)), to be delivered by 2016. At the time of writing, it is believed that early pre-application discussions have been held between Plymouth City Council's Development Management Department and a developer, whose intention it is to develop a 2,600 m² retail unit.
- Park and ride facility at Coombe Farm, near to the St Budeaux bypass / A38 interchange, mooted in Plymouth's Sustainable Communities Development Plan Document which was the subject of consultation during early 2011.

- **MoD Submarine Dismantling Project.** The purpose of the Submarine Dismantling Project is to develop a solution for the disposal of the UK's nuclear submarines after they have left service with the Royal Navy. This MoD project extends over a 60 year period and includes the provision of facilities to dismantle 27 defuelled nuclear submarines of past and current classes. In the current phase of the project, the MoD is seeking to identify how best to dismantle the submarines; where best to dismantle them; where best to store the Intermediate Level Radioactive Waste; and how it will work with industry to achieve the aims of the project. None of these decisions will be taken until after the MoD has completed a public consultation and Strategic Environmental Assessment, both occurring in 2011. Devonport is a candidate site for submarine dismantling.

19.3.21 The potential cumulative effects from these planned developments are considered in Table 19.2 overleaf.

19.3.22 Despite MVV being awarded the SWDWP contract, Viridor has stated that it still intends building its plant at New England Quarry subject to receiving planning permission. Because of this, an assessment of the cumulative air quality effects of both the EfW facilities being developed has been undertaken.

Table 19.2: EfW CHP Facility Effects in Cumulation with Other Proposed Developments

Assessment Topic	Help for Heroes Accommodation Block	Help for Heroes Rehabilitation Centre	Devonport Landing Craft Collocation Project	Increased helicopter movements in the North Yard landing base	Weston Mill District Centre	Park and ride facility at Coombe Farm	MoD Submarine Dismantling Project	Viridor's proposed EfW Facility at New England Quarry
Ecology	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	Potential for works to remove two existing culverts and construct new bridge to occur concurrently with DLCCP works in Weston Mill Creek and Lake. However, works for each would be subject to the necessary mitigation measures for working in or close to the water environment, so there are no foreseen significant cumulative effects. Both projects commit to cleaning up litter, rubble, etc in Weston Mill Creek so there are expected to be some beneficial cumulative effects in this respect.	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	There are insufficient details available for the MoD submarine dismantling project to make a judgement about potential cumulative effects.	No foreseen significant cumulative effects during construction or once the facility is operational.
Landscape and Visual	It is not considered that there will be a significant cumulative landscape and visual effect, during construction or once the facility is operational, given the existing land uses and character of the naval base and dockyard.	It is not considered that there will be a significant cumulative landscape and visual effect, during construction or once the facility is operational, given the existing land uses and character of the naval base and dockyard.	The location of the proposed DLCCP is currently Brownfield land and is used for light industry, storage of equipment and a helicopter landing area. The proposed use is in keeping with existing dockyard uses and the proposed new buildings are not of significant height. Although adjacent to the area to be used for the proposed EfW CHP facility, it is not considered that there will be a significant cumulative landscape and visual effect, either during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	There are insufficient details available for the MoD submarine dismantling project to make a judgement about potential cumulative effects.	No foreseen significant cumulative effects during construction or once the facility is operational.
Cultural Heritage	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	There are insufficient details available for the MoD submarine dismantling project to make a judgement about potential cumulative effects.	No foreseen significant cumulative effects during construction or once the facility is operational.

Assessment Topic	Help for Heroes Accommodation Block	Help for Heroes Rehabilitation Centre	Devonport Landing Craft Collocation Project	Increased helicopter movements in the North Yard landing base	Weston Mill District Centre	Park and ride facility at Coombe Farm	MoD Submarine Dismantling Project	Viridor's proposed EfW Facility at New England Quarry
Contamination – Land and Water Quality	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	Potential for works to remove two existing culverts and construct new bridge to occur concurrently with DLCCP works in Weston Mill Creek and Lake. However, works for each would be subject to the necessary mitigation measures for working in or close to the water environment, so there are no foreseen significant cumulative effects during construction or once the facility is operational..	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	There are insufficient details available for the MoD submarine dismantling project to make a judgement about potential cumulative effects.	No foreseen significant cumulative effects during construction or once the facility is operational.
Hydrology, Hyrdogeology and Flood Risk	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	Potential for works to remove two existing culverts and construct new bridge to occur concurrently with DLCCP works in Weston Mill Creek and Lake. However, works for each would be subject to the necessary mitigation measures for working in or close to the water environment, so there are no foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	There are insufficient details available for the MoD submarine dismantling project to make a judgement about potential cumulative effects.	No foreseen significant cumulative effects during construction or once the facility is operational.
Traffic and Transport	Potential overlap of construction activities during 2012 and therefore traffic in the Camel's Head area. Measures will be put in place to minimise as far as possible construction traffic effects resulting from the EfW CHP facility, including the use of Goschen Yard for a park-and-ride facility. It is understood that consideration is being given by the Help for Heroes project team to re-opening Rodney Gate, between Camel's Head and Drake Main Gate, which was successfully used during the recent reconstruction of the Fleet Accommodation Centre.	Potential overlap of construction activities during 2012 and therefore traffic in the Camel's Head area. Measures will be put in place to minimise as far as possible construction traffic effects resulting from the EfW CHP facility, including the use of Goschen Yard for a park-and-ride facility. It is understood that consideration is being given by the Help for Heroes project team to re-opening Rodney Gate, between Camel's Head and Drake Main Gate, which was successfully used during the recent reconstruction of the Fleet Accommodation Centre.	Potential overlap of construction activities during 2012 and therefore traffic in the Camel's Head area. Measures will be put in place to minimise as far as possible construction traffic effects resulting from the EfW CHP facility, including the use of Goschen Yard for a park-and-ride facility. Operational traffic flows from this project have been modelled in the Transport Assessment. The Weston Mill Drive / Carlton Terrace junction is currently operating over its design capacity and the DLCCP and EfW CHP projects would cause additional traffic to pass	No foreseen significant cumulative effects during construction or once the facility is operational.	Construction periods unlikely to overlap. Operational traffic flows from this project have been modelled in the Transport Assessment. The Weston Mill Drive / Carlton Terrace junction is currently operating over its design capacity and the District Centre and EfW CHP projects would cause additional traffic to pass through this junction. The contribution of the EfW CHP facility traffic would be low.	Construction periods unlikely to overlap. Should a planning application be submitted for this development, the developer would have to consider the cumulative traffic impact with the proposed EfW CHP facility (should the proposed EFW CHP facility have been granted planning permission at that juncture). There is potential for changes in traffic movements in the vicinity of Camel's Head and Weston Mill Drive.	Should a planning application be submitted for this development, the developer would have to consider the cumulative traffic impact with the proposed EfW CHP facility (should the proposed EFW CHP facility have been granted planning permission at that juncture). There is potential for increased traffic movements in the vicinity of Camel's Head and Weston Mill Drive.	No foreseen significant cumulative effects during construction or once the facility is operational.

Assessment Topic	Help for Heroes Accommodation Block	Help for Heroes Rehabilitation Centre	Devonport Landing Craft Collocation Project	Increased helicopter movements in the North Yard landing base	Weston Mill District Centre	Park and ride facility at Coombe Farm	MoD Submarine Dismantling Project	Viridor's proposed EfW Facility at New England Quarry
	No foreseen significant cumulative operational traffic effects.	No foreseen significant cumulative operational traffic effects.	through this junction. The contribution of the EfW CHP facility traffic would be low.					
Air Quality	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	The traffic data and air quality assessment have modelled an additional scenario which includes the potential future traffic from the DLCCP and Weston Mil District Centre projects. The evaluation of the potential combined impact on annual mean NO ₂ concentrations of EfW CHP facility stack emissions, and road traffic emissions from the EfW CHP facility and these two other projects, demonstrates that there would not be an exceedence of the annual mean criteria for NO ₂ . There are therefore no foreseen significant cumulative effects during construction or once the facility is operational.	Helicopter movements already occur and any proposed increase is not considered likely to lead to significant cumulative effects.	The traffic data and air quality assessment have modelled an additional scenario which includes the potential future traffic from the DLCCP and Weston Mil District Centre projects. The evaluation of the potential combined impact on annual mean NO ₂ concentrations of EfW CHP facility stack emissions, and road traffic emissions from the EfW CHP facility and these two other projects, demonstrates that there would not be an exceedence of the annual mean criteria for NO ₂ . There are therefore no foreseen significant cumulative effects during construction or once the facility is operational.	Should a planning application be submitted for this development, the developer would have to consider the cumulative air quality impact with the proposed EfW CHP facility (should the proposed EFW CHP facility have been granted planning permission at that juncture). There is potential for changes in traffic movements, and therefore air quality effects, in the vicinity of Camel's Head and Weston Mill Drive.	Should a planning application be submitted for this development, the developer would have to consider the cumulative traffic impact with the proposed EfW CHP facility (should the proposed EFW CHP facility have been granted planning permission at that juncture). There is potential for increased traffic movements, and therefore air quality effects, in the vicinity of Camel's Head and Weston Mill Drive.	The distance between New England Quarry and North Yard is such that the maximum ground level impacts of the two plants would not co-incide. The risk of cumulative effects is therefore not significant.
Noise and Vibration	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	The traffic data and noise assessment have modelled an additional scenario which includes the potential future traffic from the DLCCP and Weston Mil District Centre projects. Based on the results of the noise assessment it can be concluded that there are no foreseen significant cumulative effects.	Helicopter movements already occur and any proposed increase is not considered likely to lead to significant cumulative effects.	The traffic data and noise assessment have modelled an additional scenario which includes the potential future traffic from the DLCCP and Weston Mil District Centre projects. Based on the results of the noise assessment it can be concluded that there are no foreseen significant cumulative effects.	Should a planning application be submitted for this development, the developer would have to consider the cumulative noise impact with the proposed EfW CHP facility (should the proposed EFW CHP facility have been granted planning permission at that juncture). There is potential for changes in traffic movements, and therefore noise effects, in the vicinity of Camel's Head and Weston Mill Drive.	Should a planning application be submitted for this development, the developer would have to consider the cumulative traffic impact with the proposed EfW CHP facility (should the proposed EFW CHP facility have been granted planning permission at that juncture). There is potential for increased traffic movements, and therefore noise effects, in the vicinity of Camel's Head and Weston Mill Drive.	No foreseen significant cumulative effects during construction or once the facility is operational.

Assessment Topic	Help for Heroes Accommodation Block	Help for Heroes Rehabilitation Centre	Devonport Landing Craft Collocation Project	Increased helicopter movements in the North Yard landing base	Weston Mill District Centre	Park and ride facility at Coombe Farm	MoD Submarine Dismantling Project	Viridor's proposed EfW Facility at New England Quarry
Construction Waste	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	There are insufficient details available for the MoD submarine dismantling project to make a judgement about potential cumulative effects.	No foreseen significant cumulative effects during construction or once the facility is operational.
Daylight, Sunlight and Overshadowing	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	There are insufficient details available for the MoD submarine dismantling project to make a judgement about potential cumulative effects.	No foreseen significant cumulative effects during construction or once the facility is operational.
Socio-economics	Both proposals will create new jobs and facilities within the dockyard. It is considered that in cumulation there would be an overall beneficial socio-economic cumulative effect.	MVV has already had extensive discussions with the MoD and the designers for the Rehabilitation Centre project and reached agreement in principle to supply the Rehabilitation Centre with steam. Both proposals will create new jobs and facilities within the dockyard. It is considered that in cumulation there would be an overall beneficial socio-economic cumulative effect.	MVV has already had extensive discussions with the MoD and the designers for the DLCCP and reached agreement in principle to supply the DLCCP with steam. Both proposals will create new jobs and facilities within the dockyard. It is considered that in cumulation there would be an overall beneficial socio-economic cumulative effect.	No foreseen significant cumulative effects during construction or once the facility is operational.	Both proposals will create new jobs and facilities within or in close proximity to the dockyard. It is considered that in cumulation there would be an overall beneficial socio-economic cumulative effect.	No foreseen significant cumulative effects during construction or once the facility is operational.	Both proposals will create new jobs and facilities within the dockyard. It is considered that in cumulation there would be an overall beneficial socio-economic cumulative effect.	No foreseen significant cumulative effects during construction or once the facility is operational.
Health and Wellbeing	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	There are insufficient details available for the MoD submarine dismantling project to make a judgement about potential cumulative effects.	No foreseen significant cumulative effects during construction or once the facility is operational.

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Cumulative Effects	Construction periods likely to overlap to a degree during 2012, but measures will be put in place to minimise as far as possible construction traffic effects resulting from the EfW CHP facility, including the use of Goschen Yard for a park-and-ride facility.	Construction periods likely to overlap to a degree during 2012, but measures will be put in place to minimise as far as possible construction traffic effects resulting from the EfW CHP facility, including the use of Goschen Yard for a park-and-ride facility. In cumulation there would be an overall beneficial sustainable energy and socio-economic cumulative effect.	Construction periods likely to overlap to a degree during 2012, but measures will be put in place to minimise as far as possible construction traffic effects resulting from the EfW CHP facility, including the use of Goschen Yard for a park-and-ride facility. Operational traffic flows from this project have been modelled in the Transport Assessment. The Weston Mill Drive / Carlton Terrace junction is currently operating over its design capacity and the DLCCP and EfW CHP projects would cause additional traffic to pass through this junction. The contribution of the EfW CHP facility traffic would be low. In cumulation there would be an overall beneficial sustainable energy and socio-economic cumulative effect. Both projects commit to cleaning up litter, rubble, etc in Weston Mill Creek so there are expected to be some beneficial cumulative effects on ecology in this respect.	No foreseen significant cumulative effects during construction or once the facility is operational.	Operational traffic flows from this project have been modelled in the Transport Assessment. The Weston Mill Drive / Carlton Terrace junction is currently operating over its design capacity and the DLCCP and EfW CHP projects would cause additional traffic to pass through this junction. The contribution of the EfW CHP facility traffic would be low.	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.	No foreseen significant cumulative effects during construction or once the facility is operational.

19.4 Conclusion

Inter-relationships

- 19.4.1 The inter-relationships between the individual environmental effects of the proposed EfW CHP facility have been assessed appropriately throughout this ES and are drawn together in this Chapter.

Cumulative Effects of EfW CHP Facility

- 19.4.2 The way that these effects of the proposed EfW CHP facility have the potential to combine together to cause cumulative effects with one another at certain sensitive locations and lead to significant effects has also been assessed.
- 19.4.3 For the residents of properties on Talbot Gardens, there would throughout the construction period be a significant visual effect due to direct views over the construction compound. There may be short term occasions during construction when there are also dust and noise impacts, which for these short term periods could combine to cause significant cumulative effects, although this would not be unexpected for any construction project.
- 19.4.4 For the residents of properties 91-138 Savage Road, again there may be short term occasions during construction when there are dust and noise impacts, which for these short term periods could combine to cause significant cumulative effects, although this would not be unexpected for any construction project.
- 19.4.5 No other properties are expected to experience significant cumulative effects.

Cumulative Effects with Other Proposed Development Projects

- 19.4.6 The potential for effects of the proposed EfW CHP facility to combine with effects from other proposed development projects in the vicinity and lead to significant effects has been assessed.
- 19.4.7 Both the proposed EfW CHP facility and the proposed DLCCP projects commit to cleaning up litter, rubble, etc in Weston Mill Creek so there are expected to be some beneficial cumulative effects on ecology in this respect.
- 19.4.8 The construction periods for the proposed EfW CHP facility, Help for Heroes accommodation block, proposed Help for Heroes rehabilitation centre and the proposed DLCCP are likely to overlap to a degree during 2012. Additional traffic in the Camel's Head area can therefore be expected during this period. As will be seen from the Transport Assessment (Appendix 12.1, Annex E) a Framework Construction Staff Travel Plan has been prepared and measures will be put in place to minimise as far as possible construction traffic effects resulting from the EfW CHP facility, including the use of Goschen Yard for a park-and-ride facility.
- 19.4.9 Operational traffic flows from the proposed EfW CHP facility, the proposed DLCCP project and the proposed Weston Mill District Centre is project have been modelled in the Transport Assessment. The Weston Mill Drive / Carlton Terrace junction is currently operating over its design capacity and all three projects would cause additional traffic to pass through this junction. As will be seen from the Transport Assessment (Appendix 12.1, Annex F) the contribution of the proposed EfW CHP facility traffic would be low.

19.4.10 The various proposed developments will bring new facilities and jobs to the area so in combination there are considered to be significant beneficial cumulative effects in this respect. There would be cumulative sustainable energy benefits as a result of the export of steam from the EfW CHP facility to the Help for Heroes Rehabilitation Centre and DLCCP.

19.5 References

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