

hayle harbour :: regeneration

South Quay

Development Proposal for South Quay/Foundry Yard Hayle Harbour

December 2010



Environmental Statement Volume 3: Non-Technical Summary

NON-TECHNICAL SUMMARY

This Environmental Statement (ES) accompanies a hybrid planning application submitted on behalf of ING Red UK (Hayle Harbour) Ltd. (the 'applicant') for a retail led mixed use development on existing brownfield land within the administrative boundaries of Cornwall Council. The application site is located on South Quay and Foundry Yard, Hayle Harbour on the north coast of Cornwall. The ES sets out the results of an Environmental Impact Assessment (EIA).

THE SITE HISTORY

The application site covers a total area of approximately 4.46ha of previously developed brownfield land at South Quay, Hayle Harbour in the South West of England. South Quay is located within the wider area that forms The Cornwall and West Devon Mining Landscape World Heritage Site. It also falls within the Hayle Conservation Area. The application site has an extensive industrial history, with the town of Hayle originally functioning as a coal importing and ore exporting port.

WHAT IS PLANNED FOR THE SITE?

The applicant is proposing to redevelop the application site situated within the administrative boundaries of Cornwall Council, for a scheme comprised of the following elements:

Elements that have been submitted in detail are comprised of:

- A retail foodstore with a gross internal area (GIA) of approximately 5,230m²;
- Unit D adjoining the retail foodstore for a cinema with a gross internal area (GIA) of approximately 430m²;
- Non-food retail units A, B and C with a combined gross internal area (GIA) of approximately 1,990m²;
- Stand-alone units F and G for a retail or restaurant with a combined gross internal area (GIA) of approximately 410m²;
- Associated access and car parking (comprised of 276 car parking spaces for the foodstore and Units D, F and G, 7 parking spaces for visitors/users of the moorings, and 43 parking spaces associated with the non food retail units A, B & C);

- Service arrangements;
- Dedication of a site for a heritage feature (i.e. the Goonvean Engine)
- Landscaping and pedestrian promenade to the whole quayside; and
- Flood prevention measures (including the raising of the existing ground level).

Elements that have been submitted in outline are comprised of:

- 30 residential units comprised of 24 two and three bed townhouses and 6 two bed apartments;
- Northern restaurant with a GIA of approximately 370m²;
- 40 car parking spaces for the residential uses – access to be determined;
- New pedestrian footbridge over Penpol Creek; and
- Public realm and landscaping improvements to the residential areas and to Isis Gardens.

In addition, a Listed Building Consent has been submitted which relates to:

- Proposed works of mitigation/repair to the Grade II Listed (Group Value) South Quay, which include repairs to the breach to the quay wall, general repairs and maintenance, construction of a new quay wall, flood protection measures (including the raising of the existing ground level) and the creation of the pedestrian quayside promenade).

HOW HAS THE SCHEME BEEN DESIGNED?

Full details of the scheme are given within the stand-alone Planning Statement and the Design & Access Statement that accompany this hybrid planning application. However, the scheme has evolved over a number of years through extensive discussions with a range of interested parties to gauge local views and to meet aspirations of the local community. It has gone through a number of reiterations to ensure that scheme recognises its context and the environmental characteristics of Hayle and the wider area.

WHAT PLANNING PERMISSION IS BEING APPLIED FOR?

The application site has had a long history of development proposals that have not been implemented. The applicant purchased Hayle Harbour in 2004, and in April 2008, an outline application was submitted to Penwith District Council for the mixed-use redevelopment and regeneration of Hayle Harbour, and development to the northeast of the Harbour. In addition, a separate application for infrastructure improvements was submitted during this period. The proposals being submitted here for South Quay and Foundry Yard referred to as '*the proposed development*' are for the hybrid application comprised of a mixed use retail led development.

WHAT ARE THE ALTERNATIVES OF THE PROPOSED DEVELOPMENT?

In accordance with good practice, alternative scenarios have been considered as follows:

- 'Do Nothing' scenario – nothing is brought forward on the site;
- Alternative locations – other sites are considered as a location; and
- Alternative designs – the site and proposed uses remain but design variations are considered.

'Do Nothing' Scenario

The 'Do Nothing' scenario assumes that no development is carried out and the current status of the application site remains unaltered. The application site is currently a disused brownfield site and is largely derelict. The majority of the site is open, un-vegetated land and as such, under the 'Do Nothing' scenario, there would be a significant loss of potential positive regeneration impacts associated with bringing the land back into economic use, for the existing and future populations at both local and regional levels.

The application site is considered to be one of the most significant areas of derelict land in a single ownership within the South West of England and as a result, under the 'Do Nothing' scenario, the application site would remain underutilised.

Alternative Locations

Guidance¹ on the review of alternative locations acknowledges that the '*consideration of alternative locations or sites will not always be available to the developer, for example, the developer may own the site and the proposal may be a means of satisfying the objective of maximising the asset of the land.*'

No other suitable or alternative sites have been identified; therefore the sequential approach to site selection with regards to the retail element of the proposed development has led to the identification of the application site.



Alternative Designs

A number of different proposals have been considered for the application site, over the thirty years since the commercial harbour activities declined. Two separate planning applications were submitted in 2007 and 2009. For both applications, a number of consultation responses from a range of statutory consultees and the Council have been received, including matters relating to ecology, flood risk, cultural heritage, and archaeology. As a result this hybrid application has evolved to take into account of these comments and have been designed to respond appropriately and sensitively to the surrounding area.

WHAT WILL ACCOMPANY THE PLANNING APPLICATION?

A range of specialist reports have been produced looking at a number of technical areas. There are various subjects covered, including what the potential changes to the traffic may be, details of the design, sustainability measures, information of the potential energy strategy of the proposed development, and assessments of the flood risk of the site. . In addition, this Non-Technical Summary forms part of the ES that has been produced following and Environmental Impact Assessment of the scheme.

WHAT IS AN EIA?

An EIA is a legal requirement, and identifies potential significant environmental effects likely to be caused by the construction and operation of a development, so that the Council and third parties (including the public) can consider the measures proposed to remove, or minimise, any significant negative impacts. It comprises a series of studies, surveys and consultations that enable the scheme to be designed to minimise its environmental impacts and identifies measures to ensure that the scheme is built and 'operated' in a sustainable way. The results of these studies are detailed in Volume 1: Main Text & Figures and Volume 2: Technical Appendices of this ES.



WHAT IS A NON-TECHNICAL SUMMARY?

The Non-Technical Summary is intended to provide members of the public, and any other interested parties without specialist technical knowledge, with information to understand the proposals and the principal findings of the EIA, as presented in the ES.

HOW IS CONSTRUCTION MANAGED TO MINIMISE ANY ENVIRONMENTAL IMPACTS?

The EIA has identified where environmental impacts from the construction phase may occur. Although these are generally temporary in nature, it is still important that these are controlled ('mitigated') properly to avoid any nuisance or environmental damage.

In accordance with best practice and general construction policies, before work on the scheme can commence, a Construction Environmental Management Plan (CEMP) will be established by the Principle Contractor. This will contain site-based systems for the effective management of health, safety and environmental matters; it will outline all of the controls that need to be in place and is tailored for each particular site. The contractor will seek to minimise disturbance to sensitive receptors, including local residents, schools, and flora (plant species) and fauna (animal species) where appropriate, and pursuant to this, good construction site practices will be employed to reduce noise and dust disturbance.

Construction of the proposed development will be carried out in accordance with health and safety legislation, applicable standards and design codes. The requirements of the *Management of Health and Safety at Work Regulation*², the *Construction (Design and Management) Regulations*³ and the *Construction (Health, Safety and Welfare) Regulations*⁴ will be adhered to.

TRANSPORT

A transport assessment has been carried out to consider the potential impacts resulting from the construction and operation of the proposed development on the local transport environment, and was undertaken in accordance with guidance given by the Institute of Environmental Management and Assessment guidelines, Environmental Assessment of Road Traffic. The assessment considers the effect of the predicted level of traffic generated by the proposed development in the context of existing traffic flows on the adjoining network. The impact of the total number of vehicles and trips per mode is assessed throughout the working day with consideration of the effects during the typical weekday peak hours.

Over the construction phase of the proposed development, a minor negative impact through the increase in traffic flow is expected both on the South Quay and Foundry Yard sites. The type and number of vehicles generated during the construction period will be dependent on the type and intensity of work undertaken in the different construction phases but this is generally a short term impact associated with the key construction phases.

It is considered that the operational phase of the proposed development will result some increased traffic flow for both sites. However due to the public realm improvement scheme, it is anticipated that even though there will be a slightly higher flow in traffic during peak hours, the traffic calming measures will provide a safer environment for pedestrians, cyclists and motorists overall.



Included within the traffic calming scheme is the proposal to carry out improvement on the local pedestrian environment between South Quay, the Foundry Yard and the town centre. A new continuous footway, raised table and signalised pedestrian crossing aims to remove the existing severance that the South Quay and Foundry Yard has from the town centre; a further access through Isis Gardens will also improve penetration through the

existing railway viaduct. In addition to these pedestrian measures, new bus stops located adjacent to both Foundry Yard and South Quay will help residents by promoting an alternative to the car and encourage more sustainable transport.

A Travel Plan for the proposed development has been prepared with the aim of making people aware of alternative and more sustainable transport options, providing incentives to use modes considered more sustainable than the private car. In addition cycle facilities will be provided on-site to encourage the use alternative forms of travel. It is therefore considered that the proposals will result in a positive impact on non-car travel as a result of the Travel Plan.

NOISE & VIBRATION



A review has been undertaken of current planning guidance, British Standards and other relevant guidance and policy documents, relevant to the assessment of noise and vibration from the construction and operational phases of the type of development proposed.

Baseline noise and vibration levels in the vicinity of the application site have been undertaken as part of the impact assessment process. A baseline noise study was carried out between 10th-13th August 2009 under suitable weather conditions and representative ambient and background noise levels have been determined for both day and night-time periods. These were undertaken at the closest residential properties along Penpol Terrace, Carnsew Road, Trevoarn and Roman Court, as well as on open ground at South Quay itself.

Noise and vibration during the construction phase will be monitored taking into consideration the advice provided in British Standard for Noise & Vibration Control. Calculations show that noise levels during the construction phase of the proposed development resulting from all activity would be typical for a construction site of this nature, and as such would be temporary in nature.

Prediction of noise from construction activities has been made for the different phases of activities, based on the typical construction plant likely to be used. The greatest impact on residential receptors is likely to arise from the piling works, and give rise in some locations to a moderate or major impact, although these are relatively short in duration.

Although the noise from construction activities are short in nature, measures will be adopted to reduce the impact of noise due to construction activities. Vibration levels resulting from the construction phase of the proposed development are hard to predict accurately but would be likely to have a negative impact without appropriate mitigation measures being in place. Mitigation measures for construction-related noise and vibration will therefore be recommended in consultation and agreement with the Council, including limiting hours of working to daytime, provision of early hoarding and screening, as well as controls to ensure that the impact of noise and vibration during the construction of the development is adequately monitored and controlled.

During the operational phase of the proposed development, it is considered that the change in noise level on all road links won't be noticeable (less than 3dB) and therefore will have no impact on residential receptors. Any potential negative noise and vibration impacts that might result from the proposed development will be reduced or removed through a combination of the following measures:

- Provisions will be made for the control of noise emanating from the buildings, ensuring that rating level of noise emitted from all fixed plant, equipment and/or machinery at the site shall not exceed a level of more than 5dB above the prevailing background noise levels at any time. The assessment will be made in accordance with British Standards;
- Cages and pallets should not be moved at night outside of the vehicle and loading dock (outside in the open yard) within the service yard for the foodstore, and that the use of a compactor is restricted to use during the day-time; and
- Depending on the use of the stand-alone retail units, which have currently assumed extended opening hours, restrictions on hours of opening may be applied via the licensing process (e.g. if musical events are considered). In addition a more detailed noise attenuation strategy may be developed prior to construction and use of the commercial units.

It is therefore considered that, subject to mitigation measures, the development could proceed without the likelihood of causing significant noise and vibration impacts.

AIR QUALITY

The assessment of the possible impacts from the proposed development on local air quality has been undertaken. The assessment looked at potential impacts during both the construction and operational phases. With regard to the construction phase, the assessment looked into the

potential air quality impacts from vehicle emissions, dusk, and remediation techniques. For the operational phase of the proposed development a computer screening model was used to predict concentrations of nitrogen dioxide (NO₂) and fine particles (referred to as PM₁₀) at locations sensitive to changes in air quality resulting from changes in traffic flows.

The impacts to air quality during the construction phase of the proposed development are likely to be limited to impacts from dust from construction activity and emissions from construction traffic. Emissions from on-site generators and similar equipment are expected to be very low due to the typical small size of equipment likely to be used although where construction works disturb sediments in Penpol Creek there is a possibility that some odours are released, albeit temporarily, which will dissipate as soon as the tide level in the Creek increases.

The CEMP will include measures to control dust emissions and will pay particular attention to prevailing wind direction, weather conditions, proximity of potential receptors and the type of construction activity taking place.

The air quality model predictions indicate that increased traffic on Carnsew Road may result in a change in NO₂ and PM₁₀ concentrations of *medium* magnitude. However, this is based on a worst-case scenario, and actual levels are likely to be considerably lower. When the traffic contributions also consider the total predicted concentrations, they are well within the relevant air quality objectives. Therefore, the increase in traffic on local roads due to the proposed development is predicted to have an impact of minor significance on air quality. The use of the Travel Plan and the encouragement of non car modes of transport will help reduce any impact further.



LANDSCAPE & VISUAL

Landscape is defined in the *European Landscape Convention*⁵ as '*...an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors*'. The landscape and visual assessment of the proposed development evaluated the impact of the changes as a result of the development on the surrounding landscape character and on visual amenity. The landscape and visual assessment of the proposed development evaluated the impact of the changes as a result of the development on the surrounding landscape character and on visual amenity.

The application site comprises is predominantly under used Brownfield land, and is generally open, un-vegetated, with small areas of sparse grassland and sparse scrub. The urban tradition of the site and the history of large-scale buildings together with degraded character make change to the existing character acceptable. The buildings proposed on South Quay would not significantly alter the character of the area as the ground level areas would remain predominantly flat and allow views through to the wider landscape.

In terms of the existing landscape/townscape character, the development proposals have taken into account the existing character and landscape elements on and adjacent to the site, retaining the most valued qualities of South Quay. The proposed development on South Quay would allow important features such as the viaduct, the water, the scale of the buildings in the foundry to remain as key elements in the area. The scheme has brought forward a scheme of high quality built form and landscape design, and the provision of good public realm. Linear features of trees and lighting will reinforce the elongated nature of South Quay, and reflect the terraces along Penpol Terrace and key views have been maintained through the development to and from listed buildings/churches, rather than creating 'solid' development.

SOIL CONDITIONS, GROUNDWATER & CONTAMINATION

The ground conditions of the application site were identified to assess the current geology that underlie the site and the potential for contamination from the current and historical land uses. The previous industrial nature of the application site may have impacted both the soil and underlying groundwater and as such the site has been extensively investigated and soil and groundwater contamination assessed. Published and site-specific information indicates that the application site is underlain by Marine and Estuarine Alluvium and in turn is underlain by the Gramscatho Beds of the Devonian Period, with the higher ground to the north and west consisting of Quaternary Blown Sand. Published hydrogeological information classifies the geology beneath the application site as a Minor Aquifer which do not have a high permeability, and the Environment Agency reports that the application site does not lie in a groundwater source protection zone. The main Hayle river valley is approximately 200m to the south, with an impounded water body known as the Millpond and further investigation recorded groundwater between 3 and 4m below ground level with a general flow towards the estuary and harbour, and having a large tidal influence.



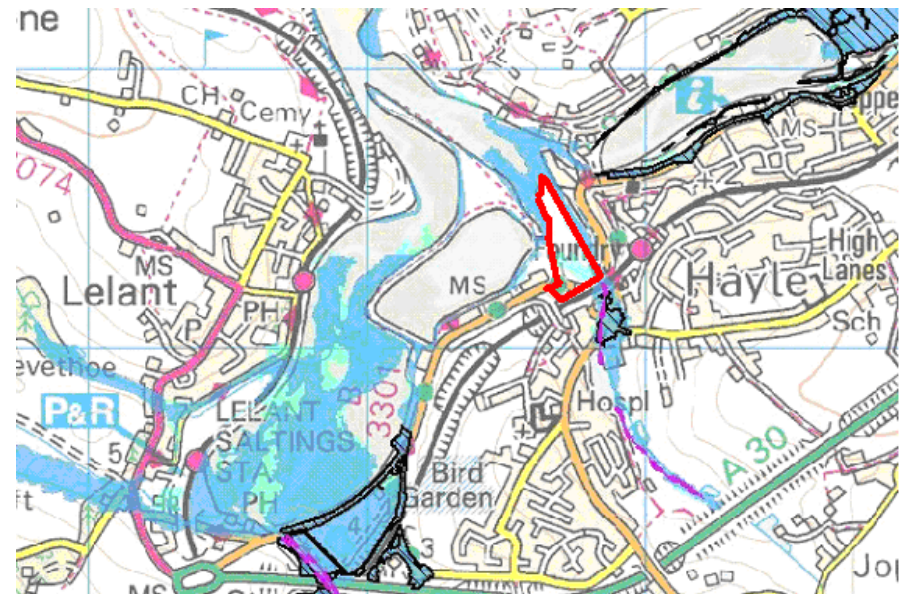
At the construction phase, there is potential for contamination to be mobilised; however, impacts will be controlled through the CEMP and include measures to contain any spillages, or leakage into the watercourses. There will be a need to remediate the land and groundwater under the site, after the detailed approach of what this will require has been agreed with the Environment Agency and LPA.

WATER RESOURCES

A study of the hydrology and hydrogeology has been undertaken to identify potential environmental constraints such as aquifers; existing water abstractions and discharges; floodplains; and watercourses; and rivers that might be at risk of pollution from sediment run-off or spillages associated with the proposed development. As part of this study, the effects of construction and operational activities associated with the proposed development on the surrounding water environment were considered. Where appropriate, suitable mitigation measures have been suggested to address where potential impacts could arise.

The proposed development of South Quay and Foundry Yard will have various minor impacts on Water Resources, both positive and negative. The primary cause of impact will be during construction and using the CEMP to ensure standard good practice will mitigate against those possible impacts. Although no major negative impacts are predicted, best practice measures will be followed and risks associated with the proposed development will be identified and minimised to avoid risk to water courses during construction.

During operation, it will be important to ensure that the design provides for adequate protection of the Harbour, using silt traps and interceptors in the storm water drainage system where required. Details on what will be needed for the provision of foul drainage will be determined following the network capacity modelling work to ensure the current application and the wider development of Hayle Harbour will be accommodated within any improvements considered for the South West Water foul drainage network.



The Flood Risk Assessment contains details of the impacts associated with flood risk and suitable mitigation. The main potential source of flooding is tidal, and the proposals to accommodate for any flood risk include a flood defence level of 6.17m ODN. With regard to surface water runoff, the proposed development will deliver a scheme that will provide a surface water drainage system improving the existing surface water drainage arrangements and does not increase the risk of flooding to neighbouring sites.

ECOLOGY

The impact of the proposed development on the ecological value of the application site and on the wider area of ecological zones of influence has been assessed. There are two statutory Site[s] of Special Scientific Interest (SSSIs) covering land within and adjacent to the site boundary; these are the Hayle Estuary and Carrack Gladden SSSI and The Gwithian to Mexico Towans SSSI. There are also three non-statutory designations, which are The Godrevy Area of Great Scientific Value, the RSPB Hayle Estuary Nature Reserve and the St Ives Bay Sensitive Marine Area. The area local to the site include habitats associated with the estuary complex, these include: inter-tidal sand and mudflats; tidal open water; and saltmarsh and habitats associated with terrestrial land, these include: sand dunes; dune grassland with associated scrub; disused, open land colonised by mosses/sparse grassland; and disused quarries which support areas of introduced and native scrub. Aquatic flora and fauna of the Hayle Estuary complex is restricted due to historical contamination of the sediments and the continued poor water quality due to mining drainage and spoil heaps in the various catchments. Therefore there will be a limited/minimal amount of work that impacts on the aquatic ecology.



In terms of terrestrial ecology within the application site it is of limited value compared to the surrounding land and other development sites in the vicinity of Hayle Harbour. The most important species found at the application site was petalwort, which is fully protected under Schedule 8 of the Wildlife & Countryside Act 1981, and listed in the EC Habitats Directive. Before any development or construction takes place a translocation and monitoring plan will be implemented and include The Petalwort Translocation and Monitoring Plan; the implementation of a CEMP; the implementation of an Access Management Plan to improve access to the Triangular Spit; and the creation of a Light Spillage Management Plan.

With regard to ornithology, the Hayle Estuary and Carrack Gladden SSSI encompasses the Porth Kidney sand dune system west of the estuary mouth and the main inter-tidal basins of Lelant Water in the southwest of the estuary, Carnsew Pool south of the harbour, and Copperhouse Pool to the east. The primary reason for the SSSI status of the estuary lies in the populations of waterfowl and shorebirds that occur in winter and pass through on spring and autumn migration. The CEMP will manage potential construction disturbance impacts and impacts arising from noise, dust and accidental spillages. Taking into consideration the proposed development in combination with other permitted and proposed developments in the vicinity, the overall cumulative impact is deemed to be localised, permanent and minor negative.

ARCHAEOLOGY & CULTURAL HERITAGE

The application site and surrounding area has an extensive industrial history with South Quay being built in 1819 and was constructed alongside an existing slipway or graving dock. Aerial photographs taken in 1931 shows buildings along the western side of South Quay, as well as ships being broken up on-site with these buildings being removed in the 1960s-70s, around the same time that the slipways were filled in.

Currently, the listed quay walls survive and remain on-site, although parts of the wall are in bad repair and have collapsed. The area of the historic harbour of Hayle is considered to be in a poor state and this detracts from the site and surrounding area generally. Despite the current condition of the application site, the site and surrounding area have a number of statutory designations placed upon them.

The application site at South Quay and Hayle Harbour forms one of ten sites within the Cornwall and West Devon Mining Area, which was inscribed as a World Heritage Site by UNESCO in July 2005. The designation of the Cornwall and West Devon Mining Area WHS is a recognition of the international importance of the area, it's role in the industrialisation of Britain. However, the application site is not visible from much of the World Heritage Site as to the east and west, the hills screen the Quay, and the railway viaduct to the south introduces a visual barrier between the town and the application site.

The Hayle Conservation area, which was designated in 1998 (and extended in 2004) encompasses much of the town of Hayle, including the Copperhouse and Foundry areas. While there is a Conservation Area as a whole is based on the activities and heritage of the two great historic companies of the town, the Cornish Copper Company and Harveys, it is made up of a number of areas that have their own distinctive characters. The present characteristic of this part of the Conservation Area is of a neglected post industrial site. The baseline condition of the site is considered to be generally poor, with a number of the important industrial buildings have been demolished. However, the essential defining elements that have

survived include the harbour quay walls and a number of associated features such as bollards, rings and mooring posts. These features are an important to the present and future character of the application site.

South Quay is a Listed Building for its group value comprised of a number of listed structures, which are of national significance. The only Listed Structures in the application site are the quay walls and the associated quay furniture, which are generally poor in condition.

The proposed development is considered to have a negligible impact on these areas generally; the design of the buildings on-site have taken into account of the heritage assets and values both on-site and within its surrounding context. In addition, the repair and rebuild of the quay fabric, provision of public access to the quay, reuse of a derelict brownfield site, and dedication of space for a heritage asset is considered to be of a beneficial and positive impact not only to the application site but within Hayle and the wider area.

SOCIO-ECONOMIC

A range of socio-economic factors were assessed to determine how the proposed development would affect the immediate and wider community. It is apparent that the local area experiences average levels of deprivation in most areas with some notable exceptions. There is significant education deprivation in the area and it is considered that in bringing forward the proposed development, the provision of training opportunities would also be beneficial to the local community.

There is also considered to be significant employment and income deprivation with the region. Within the travel to work areas around the application site, only 60% of the working age population are economically active. Of the working age population the travel to work area has 12% fewer employees when compared to the national average. Consequently, the significant number of employment opportunities forecast as a result of the proposed development at both the construction and operational stages are considered to represent a major positive impact for the area.

It is clear that a high priority of the overall proposed development is to deliver improvements to contribute to the aims and objectives of the various development plans for the area. In creating construction and operational job opportunities, the proposed development accords with policies at both the national, regional, and local level that



seek to ensure the continues economic development of the local area supporting wider regional growth.

The construction process, and the potential environmental impacts arising through the various activities, may be of concern to local residents in terms of noise and vibration, dust nuisance, health and safety, construction traffic waste management and visual impacts. These will be mitigated through good practice onsite including the CEMP, CCS and other mitigation measures presented in the Environmental Statement. During the construction phase, residual impacts will result in a net increase in employment, which is considered to be moderate positive. Owing to the nature of the proposed development, the overall impact of the development on local education, primary care, public open, play space and recreational facilities were negligible. The assessment was focussed on the more relevant aspect of economic impacts, specifically in terms of the likely employment opportunities generated as a result of the retail units that form a significant element of the proposed development.

The development will provide longterm positive impacts by providing a net increase in employment opportunities to satisfy local housing trends. In addition, it is anticipated that the proposed development will improve the physical environment and overall 'quality of life' for the area, reducing crime levels and fear of crime, as well as supporting social and economic objectives for the local and wider area.

ENERGY

The Energy Assessment was carried out for the proposed development to identify current conditions of the application site and to highlight mitigation measures, in line with best practices with respect to energy consumption. The study evaluated the impact of the changes in energy use as a result of the development. The application site is currently a Brownfield site, with previous structures removed and demolished; the baseline energy consumption at the application site is currently zero.

The assessment identified the worst-case scenario (i.e. built to current Building Regulations 2010), which was compared against the baseline conditions, both on-site and within the application site's local and regional context. At the district, county and regional levels, this will be negligible particularly following the incorporation of best practice construction methods. It is considered that at the operational stage, the proposed development will have a moderate negative impact at the local level, but the significance of this impact will reduce to minor negative when considering the application site within its geographical context at district level.



However, when compared against the worst-case scenario, the mitigated scheme will result in a minor positive impact, by reducing the overall energy consumption associated with building use.

In addition, the proposed development will incorporate a number of other initiatives that will encourage residents, building occupants and visitors to use and access the site in an energy efficient and sustainable manner. Building user guides for both the retail and residential elements will provide guidance on how to use the buildings efficiently; sustainable travel will also be promoted, through the provision of appropriate cycle storage spaces, as well as guidance provided within a Travel Plan. The specification of renewable technologies will not only raise public awareness, but also seek to contribute to local, regional and national targets and objectives of meeting generation of energy through renewable sources. On this basis, the identified mitigation measures will result in a minor to moderate positive impact overall.

WASTE

The assessment into waste determined the environmental impacts of waste management from the proposed development in terms of the expected quantities, their composition as well as the local and regional capacity to treat waste. The proposed measures for the reduction re-use and recycling were set out. In order to estimate the potential level of waste generated, a number of scenarios were developed, establishing the likely lower and upper. With regard to commercial and industrial waste, only one scenario was developed owing to lack of data.

With regard to the construction stage waste impacts, the proposed development will not generate any significant levels of demolition waste due to the brownfield nature of the site. Waste however is anticipated to be generated as a result of the infrastructure, building construction and site preparation works.

Operational waste impacts have also been considered. By calculating the estimated waste generation from residential dwellings, the assessment found that overall, the impacts will be negligible. In terms of the commercial element of the proposed development the CIBSE guidelines were used to inform the likely waste arisings. This was then compared with the commercial baseline for the region, and a negligible impact has been determined.

The assessment recognised that a number of steps and best practice measures can be undertaken at the design and construction stages to minimise potential impacts. Therefore measures have been considered to prevent and minimise waste including efficient procurement of materials in order to



minimise unnecessary waste arisings. In addition the team are committed to using assessment tools such as BREEAM to achieve high standards of site waste management at the construction stage.

At the operational phase, measures will be incorporated into the commercial elements of the proposed development to ensure that waste generation can be appropriately re-used and recycled as feasible. This will include the designation of separate waste recycling storage areas for all operator generated waste and the provision of a designated area for a compactor/baler (for the retail/supermarket elements) so that the packaging waste generated may be appropriately compacted and bound before being sent for recycling. The residential units will also target maximum reuse and recycling of waste through the guidance set out in Building User Guides.

CUMULATIVE IMPACTS

The residual impact of the proposed development in combination with the residual impacts of other major developments within the vicinity of the application site was assessed. In particular, the assessment considered effects that are:

- Spatial: giving rise to effects over a large area or giving rise to effects on areas of special environmental sensitivity;
- Temporal: giving rise to effects over a longer period of time; or
- Incremental: increasing the significance of predicted effects due to interactions with other development under review.

The following projects were identified for consideration within the cumulative assessment:

- Hayle Harbour Masterplan;
- Hayle Harbour Phase 1 Infrastructure;
- Jewson Site; and
- Wave Hub.

When construction phases of one or more projects coincide with one another, the significant of the cumulative residual impacts depends on the characteristics of the overlapping projects and the duration of the overlap. A number of major developments have been identified within the

immediate vicinity of the application site that are likely to result in cumulative impacts on the environment during the construction phase of the proposed development, assuming a worst-case scenario.

Many of these impacts, such as nuisance and disturbance impacts, construction noise and vibration, air quality will be controlled and minimised through the implementation of construction best practices that can be effectively delivered by means of a formalised CEMP by the principal contractor. It was concluded that the potential cumulative construction impacts will be temporary in nature and of moderate positive significance.

During the operation of the proposed development, cumulative impacts are both positive and negative. The long term cumulative impacts from transportation, archaeology, landscape and visual, noise and vibration, water resources, soils, groundwater and contamination were considered minor negative to minor positive.

There will be a number of long-term impacts on ecological resources in the area, such as temporary negative impacts arising from disturbance of habitats and species but also positive residual impacts arising from long-term ecological management strategies. This results in overall cumulative impact that is anticipated to be negligible or minor positive.

It should be noted that the cumulative assessment presents a worst-case scenario. In reality, the construction phases are not likely to all coincide but potentially overlap for relatively short periods, thus reducing the significant of the cumulative residual impacts.

CONCLUSION

The ES concludes that the mitigation measures proposed for the environmental impacts of the proposed development will be acceptable in any event.

Where the proposed development has the potential to generate some environmental impacts, a range of mitigation measures have been recommended to address any significant negative impacts that may occur during both the construction and operation phases of the proposed development.

FURTHER INFORMATION

The ES is available for viewing by the public during normal working hours at the Planning Department of Cornwall Council. Comments on the planning application should be forwarded to Cornwall Council at the address below:

County Hall

Treyew Road

Truro

Cornwall

TR1 3AY.

Additional copies of the Non-Technical Summary are available free of charge and copies of the full ES can be purchased at a charge of £100 (for Volumes I & Volume II) available from:

Environmental Perspectives LLP

24 Bruton Place

London

W1J 6NE.

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REFERENCES

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- ¹ IEMA Perspectives, (2004); *Guidelines for Environmental Impact Assessment*, IEMA.
 - ² HMSO, (1999); *The Management of Health and Safety at Work Regulations*. TSO.
 - ³ HMSO, (1994); *The Construction (Design and Management) Regulations*. TSO.
 - ⁴ HMSO, (1996); *The Construction (Health, Safety and Welfare) Regulations*. TSO.
 - ⁵ Council of Europe, (2000); *European Landscape Convention*, Council of Europe.