
Defence Technical College (DTC) and Aerospace Business Park (ABP) - St Athan Non-Technical Summary

Purpose of this Non-Technical Summary

This Non-Technical Summary forms part of the Environmental Statement (ES) that is associated with two outline planning applications which are being made to facilitate the major redevelopment of MoD St Athan in South Wales. The proposals include the development of a Defence Technical College (DTC) and Aerospace Business Park (ABP) which are being promoted by Metrix (the Ministry of Defence's (MoD) preferred bidder for the provision of the DTC) and the Welsh Assembly Government for the ABP. Entec UK Ltd is acting as lead consultant responsible for the production of the documentation associated with the ES.

This Non-Technical Summary describes:

- The proposed development;
- The Environmental Impact Assessment (EIA) process;
- The existing environment in and around the site of the proposed DTC and ABP;
- The environmental and mitigation measures incorporated within the proposals; and
- The likely significant effects of the development.

Site Location

The St Athan development site is located in south-east Wales, within the administrative district of the Vale of Glamorgan, approximately 8 miles west of Barry and 12 miles south-east of Bridgend. The site benefits from good transport links, being situated approximately 4 miles west of Cardiff Airport and approximately 14 miles south of Junction 33 of the M4.

The administrative centre for the Vale of Glamorgan is Barry, with other medium-sized settlements including the towns of Llantwit Major, Penarth and Cowbridge situated within the administrative boundary. Smaller villages are located in the immediate area surrounding the site including the villages of Llanmaes, Flemingston, Gileston, Boverton and the hamlet of Picketston.

The land surrounding the site comprises mainly open countryside which is in agricultural use. There are a number of farms located in the immediate area including Great House Farm to the north, Boverton Mill Farm to the south-west and Pant Yr Awel Farm, Rock Farm and Church Farm to the east.

Existing Site

MoD St Athan is split into East Camp and West Camp and is occupied by the MoD, other military occupiers, other civilian occupiers and the existing aerospace business park. The site consists of the runway and existing runway facilities and airfield equipment. There are currently in the region of 1,000 structures, including over 230,000 square metres (m²) of office, workshop, hangar and storage space, much of which is either vacant or in a poor condition (outside of West Camp). The Super Hangar (also referred to as the Red Dragon Hangar) in the centre of the site, is currently in use by the Defence Support Group (DSG).

The Development Proposals

The development proposals cover the following main elements:

Defence Technical College (DTC)

- The use and extension of the existing Super Hangar (Red Dragon Hangar) for training purposes;
 - A new energy centre;
 - A Museum of military history;
 - Sports and recreation facilities, a crèche, community centre and a 150 bed hotel;
 - Single Living Accommodation (SLA) for visiting trainees and military personnel;
 - Service Families' Accommodation (SFA) housing for up to 483 personnel and their families;
 - Messes, training buildings, offices, storage, workshops and other associated DTC facilities and buildings;
 - A Medical and Dental Centre;
 - New military church, faith centre and temple buildings and works to stop the decline of the Grade II listed St Brise Church;
 - A new firing range and respirator training facility at Picketston;
 - A Field Training Area (FTA) to the east of Cowbridge Road at Castleton;
 - A foul water pumping station;
 - An electricity primary sub-station;
 - An External Training Area and obstacle courses at Picketston;
 - An aerial farm and pole field at Picketston;
 - External parade and training hardstanding areas;
 - A tracked armoured vehicle test road within the site parallel with the main runway;
 - Petrol, oil and lubrication point (POL) and vehicle washdown area;
 - Works to the existing St Athan Golf Course at Cowbridge Road, including alterations and rearrangement of the course;
 - A Learning Resource Centre;
 - Highway works, including:
 - a new Northern Access Road (NAR) from the B4265 to Eglwys Brewis Road;
 - improvements to Eglwys Brewis Road;
 - realignment and improvements on the B4265 road at Gileston to Old Mill;
 - signal control of the St Athan cross-roads junction (within the existing highway boundary) on the B4265; and
 - Waycock Cross road junction improvement.
 - Landscaping and ecological proposals.
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Aerospace Business Park (ABP)

- The erection of new and replacement buildings and airfield operational facilities and structures, including an engine running facility (replacing an existing facility on ABP North), hangars, offices, a bulk fuel store, relocated compass swing area, relocated helipad, relocated fire training facility, and relocated Air Traffic Control tower and fire station;
 - An aerospace administration centre at the converted and extended listed Grade II Batslays Farmhouse building;
 - The provision of access roads, hardstandings and other infrastructure, security fencing, landscaping, and all associated building and engineering operations to the north and south of the main runway;
 - Some of the same highway works as for the DTC and the construction of the Southern Access Road (SAR);
 - The same foul pumping station and electricity primary sub-station as for the DTC; and
 - Landscaping and ecological proposals.
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Associated works to Llantwit Major Wastewater Treatment Works and new rising main

The development proposals also include the requirement for the extension and upgrade to the Llantwit Major Wastewater Treatment Works (WwTW) and the construction of a new rising main to transfer foul water from the development site to the WwTW. These associated works do not form part of the two main outline planning applications and will be undertaken by Dŵr Cymru Welsh Water (DCWW).

Alternatives

Defence Technical College (DTC)

The starting point for Metrix was to identify a suitable location for the development of a technical training college which would satisfy the requirements of the MoD. The original consideration of alternatives sites for technical training began with assessing 50 existing MoD establishments located throughout the UK. During a review process of the majority of these sites, MoD St Athan was identified as the best site location, and substantially met the criteria for locating a large military training college on a single site.

Aerospace Business Park (ABP)

The need to locate an Aerospace Business Park in Wales alongside an operational runway limited the number of potential locations for such a development. In south-east Wales, there were only two potential candidate sites, namely Cardiff Airport and MoD St Athan. Early feasibility work showed that St Athan offered the best solution for an aerospace business park in terms of spatial, planning and environmental considerations, and that the necessary scale of development could not be satisfactorily accommodated at Cardiff Airport.

Highways and access

A number of options for accessing the new development site were investigated. This began in 2006, in the outline proposals contained in the *St Athan Development Brief*, which, following public consultation, was approved by the Vale of Glamorgan Council (VoGC) and adopted as the basis for the determination of planning applications by the Council. Since the adoption of the Development Brief, subsequent developments, together with the refinement of the master plans for DTC and ABP, have necessitated certain changes to the access proposals.

The consideration of access options has been guided by four basic principles including:

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- The necessity to maintain the security of West Camp for the MoD;
 - The requirement to deliver an enhanced ABP to accommodate the Welsh Assembly Government's proposals;
 - The necessity (strongly promoted by the Council) to avoid extraneous traffic passing through St Athan village; and
 - Airfield airside access, runway operation and runway safety.

These four principles have been supplemented by other considerations, including those related to environmental, engineering, safety and safe-guarding factors.

Associated works to upgrade and extend Llantwit Major WwTW and rising main

A number of feasibility studies were carried out in order to identify the best option for wastewater treatment and associated conveyance of flows from the development. The potential environmental effects of the construction and operation of the rising main and works to the WwTW were considered during the feasibility process.

Consultation

The St Athan project team has undertaken a programme of consultation and communication with the local community and other stakeholders. This programme of consultation began in 2006 when the VoGC and the project team consulted widely on the draft St Athan Development Brief. In July 2008, a comprehensive programme of public consultation began which is currently on-going.

Environmental Impact Assessment (EIA)

The EIA is a process that involves collecting information about how the existing environment is likely to be affected by a proposed development. This information gathering and the subsequent assessment of how the development interacts with the environment focuses on any effects that are likely to be significant. The assessment of effects is undertaken in an impartial manner and the findings are presented in a systematic way in the ES, which is used by the VoGC (local planning authority) to inform its decision about whether the planning permissions for the developments should be granted.

The requirement for an EIA is defined in The Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999 - SI No. 293 (the EIA Regulations). For some categories of development (those falling within Schedule 2 of the EIA Regulations), the requirement for EIA depends upon the likelihood that the development will have significant effects on the environment. In these circumstances, the decision to submit an EIA has been made by the development team themselves on the basis that the proposed development falls within Schedule 2 (Schedule 2, para 10(b) urban development, infrastructure project for which the area exceeds 0.5 hectares (ha)) and therefore is EIA development, i.e. that which could result in significant environmental effects.

Once it was ascertained that the proposed development is EIA development, the next stage of the EIA process is to investigate the scope of the EIA in terms of who and what are likely to be significantly affected, and the work required to take forward the assessment of these effects.

The Scoping Report for the St Athan development was submitted to the VoGC and others in June 2008 and a scoping opinion was received in August 2008.

The potential significant effects identified during the scoping exercise were then the subject of detailed assessment, using methodologies appropriate to the different environmental topics that needed to be considered as part of an EIA. These methodologies were based on recognised good practice.

The environmental topics considered in the ES are:

- Biodiversity;
- Landscape assessment;
- Visual assessment;
- Historic environment;
- Land quality;
- Hydrology, geology and hydrogeology;
- Community;
- Traffic and transport;
- Air quality;
- Odour; and
- Noise and vibration.

The following section identifies the baseline information, environmental measures incorporated within the development proposals as a result of the EIA, and the potentially significant positive and negative environmental effects associated with the development.

Biodiversity Assessment

Baseline information

Baseline information was obtained by means of a desk study to collect relevant historical biodiversity information for the area, and extensive ecological field surveys which began as early as 2002. Through this exercise the following important baseline features (the ‘valued ecological resources’) were identified and effects on them were assessed:

- Designated sites - Sites of Special Scientific Interest (SSSIs) and candidate Sites of Importance for Nature Conservation (cSINCs);
- Water bodies and watercourses;
- Great crested newts;
- Bats;
- Badgers;

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- Species-rich hedgerows and the hedgerow network;
 - Dormice;
 - Otters;
 - Reptiles; and
 - Breeding birds

Environmental measures incorporated

The environmental measures to be implemented which relate specifically to biodiversity include the following:

- Best practice construction methods adopted in line with those stipulated in the Construction Environmental Management Plan (CEMP) produced for the site. This includes measures to deal with dust and other pollution;
- Provision of 30 new ponds to replace 3 being lost, thus enhancing the environment for species that require aquatic habitat, particularly the protected great crested newts;
- Provision of a new (or retained) large mosaic of semi-natural habitats. A variety of flora and fauna will thrive here, although in particular it will be managed for great crested newt, bats, reptiles, breeding birds and invertebrates;
- Creation of new habitat for otters including the provision of new holts;
- Provision of new bat roosts including buildings constructed specifically to fulfil this role. In addition, certain features of historic interest which are being retained, such as the Airfield Ground Defence structures, will be subject to minor works to make them suitable for use as bat roosts;
- Enhancement of existing hedgerows through new appropriate planting, and the translocation of important hedgerows where they cannot be retained within the developments;
- Appropriate landscape planting throughout the developments which aims to make the area as valuable for biodiversity as possible;
- Provision of measures to ensure compliance with the legislation relating to the biodiversity resources on the site that are afforded legal protection; and
- Provision of an outline Habitat Management Plan (oHMP) which details measures to enhance and compensate for the loss of areas of candidate Sites of Importance for Nature Conservation as a result of the development. It also details the management proposed for all other retained/created ecological resources including the new ponds.

These measures (and others) are detailed in full in the Ecology Strategy which has been produced for this site and which is appended to the main ES.

Summary of significant effects

With the implementation of the proposed environmental measures it is considered that there will be no significant negative effects on valued biodiversity resources as a result of the development. In fact, because the environmental measures are so comprehensive it is anticipated that significant positive effects will occur, particularly related to great crested newts, but also more generally for biodiversity across the wider local area.

Landscape Assessment

Baseline information

Baseline information was collected by means of a desk study and field surveys of the development site and the surrounding area within a 3km radius. The Countryside Council for Wales (CCW) LANDMAP guidance document was also used to identify important landscape receptors and to inform the assessment. Through this exercise the following important baseline features were identified and subject to assessment:

- Hedgerows, Category A and B trees, and trees subject to Tree Preservation Orders (TPOs);
- The Lower Thaw Valley and Nant Llancarfan Special Landscape Areas;
- The Glamorgan Heritage Coast;
- The LANDMAP Aspect Areas; and
- Conservation Areas affected by the development within 1km of the site.

Environmental measures incorporated

The environmental measures to be implemented which relate specifically to landscape include the following:

- Planting of additional hedgerows and translocation of hedgerows to be removed;
- Planting of native trees along sections of the boundary between the DTC site and Eglwys Brewis Road. Trees that are being lost within East Camp are also being replaced through the planting of native trees within the central Heritage Park;
- Creation of embankments that will support the new southern access road. Planting of scrub and trees on these embankments will combine to partly screen views of the most southerly proposed built form on the ABP site; and
- The location, layout and design of the proposed SFA accommodation, which will aim to limit effects on landscape character.

Summary of significant effects

With the implementation of the proposed environmental measures it is considered that there will be no significant negative effects on the landscape character and the aspect areas identified by the LANDMAP assessment. Two areas (at Picketston and south of the runway at Batslays) have been identified by this assessment as localised areas of rural character primarily because of the landscape pattern and scale created by the hedgerow network. Within these areas, the

introduction of large scale hangars, and other sporting and military infrastructure results in a significant change to this distinctive landscape pattern.

Visual Assessment

Baseline information

Important viewpoints were selected by desk-based surveys, site visits, and through consultation with the VoGC. The visual effects of the development were assessed from these viewpoints. A study area within a radius of 3km was used, as it was considered that this was the maximum distance at which any effect caused by the development could be significant. The important receptors that were identified and for which visual assessment was undertaken include:

- Users of the Public Rights of Way (PRoWs) within the 3km study area;
- Residents within settlements including Llanmaes, East Vale, Eglwys Brewis, Flemingston and St Athan;
- Individual residential receptors within the 3km study area; and
- Two landscape designations, namely The Vale of Glamorgan Heritage Coast and the Lower Thaw Valley Special Landscape Area.

In addition, photomontages of the development from a number of viewpoints were created within a radius of 5km around the development site.

Environmental measures incorporated

The main environmental measures to be implemented to reduce the visual effects of the proposed development relate to the way the design has evolved to include consideration of building height, location, form and materials. Furthermore, site-wide landscaping and habitat enhancement measures, as outlined in the biodiversity and landscape sections of this NTS, will be adopted: these will help to screen more sensitive receptors from more prominent aspects of the development.

Summary of significant effects

The assessment concluded that during the demolition and construction of the development, significant negative visual effects will occur, albeit limited to within 1km from the site. Receptors of negative effects include people using PRoW west of St Athan village, south of the B4265, west of Gileston and east and south of Llanmaes. Significant effects will also occur at certain residential properties within St Athan, Llanmaes, Eglwys Brewis village and East Vale, and a number of individual properties which lies immediately adjacent to the development site, specifically to the north, north-east, south and north-west. These areas are currently undeveloped arable or pastoral fields. Properties immediately adjacent to sections of the site also experience the greatest change to night time views.

Historic Environment Assessment

Baseline information

Baseline information was obtained by means of a desk study to collect useful existing records relating to the historic environment. This included examining detailed records of known

archaeological discoveries held on the Glamorgan Gwent Archaeological Trust Historic Environment Record (HER). In addition, an extensive geophysical survey was undertaken, with arrangements for trial trenching.

Important baseline features which were identified, and which were therefore subject to environmental assessment, include the following:

- Iron Age and undated enclosures and associated field systems (Castleton);
- Iron Age and Romano-British settlement (Red Dragon Hangar site);
- Possible Romano-British settlement and field systems (Batslays Farm);
- Possible Romano-British settlement and field system (south east of Llanmaes);
- Possible Cowbridge road to East Aberthaw Roman road;
- Possible early Medieval church and llan (Castleton);
- Possible early Medieval church (Eglwys Brewis);
- Medieval settlement (Eglwys Brewis);
- Medieval Church of St Brise (Grade II);
- West Orchard Castle medieval manor house (SAM GM083);
- Possible mill leat (south east Llanmaes);
- Eglwys Brewis Farm and the former site of St Brise rectory;
- Limekilns and associated trackways (south-east Llanmaes and MoD St Athan East Camp);
- World War II Airfield;
- Airfield Ground Defences;
- Batslays Farm (Grade II); and
- Important hedgerows.

Environmental measures incorporated

The environmental measures to be implemented which relate to the historic environment include the following:

- Intrusive development activities will be restricted where such have to occur within the sensitive locations of the various enclosures at the Castleton Field Training Area;
- Any surviving archaeological remains likely to be affected by development will be excavated and recorded in advance of construction works;

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- Design measures will be implemented to arrest the decline of the 13th century Church of St Brise, which will become a key feature at the entrance to the DTC;
 - A photographic survey of the surviving buildings of the World War II airfield will be undertaken prior to demolition works;
 - Detailed archaeological records will be compiled during conservation and refurbishment works to St Brise Church and Batslays Farm, with similar arrangements to cover the demolition of Eglwys Brewis Farm;
 - The majority of Airfield Ground Defence structures within the DTC will be retained and maintained, with provision for the detailed recording of the two pill boxes which have to be demolished as part of the developments. Those remaining in areas of public access will be presented in an appropriate manner, taking account of important aspects of their setting; and
 - The historic farm buildings at Batslays will become a key feature and resource of the new ABP development, forming part of the office provision.

Summary of significant effects

The incorporation of environmental measures into the scheme has addressed the majority of the negative effects associated with the historic environment. However, the demolition of the two pill boxes, one at Picketston (as part of the DTC scheme), and another at Batslays (as part of the ABP) has been identified as a potentially significant negative effect. Also potentially significant effects arise from the proposed incorporation of St Brise Church and Batslays as part of the DTC and ABP schemes respectively. The proposed works to arrest the decline of the Grade II St Brise Church, along with the new viable use of Batslays Farmhouse, will result in a significant positive effect.

Land Quality Assessment

Baseline information

A desk study was carried out in order to identify potential sources of contamination that may have occurred within the site. The assessment then went on to identify the sensitive receptors that could be affected by contamination. These include:

- Construction workers;
- Site users;
- Adjacent site users; and
- Future site maintenance and construction workers.

In addition, the baseline assessment identified the presence of small areas of Best and Most Versatile Agricultural Land.

Environmental measures incorporated

Additional site investigations will be carried out to identify the exact location and type of land contamination that occurs on the site. This will be undertaken before the start of the

construction phase. Where contamination is found it will be subject to treatment, including remediation, as appropriate and in accordance with relevant guidance.

Environmental measures incorporated and outlined in the CEMP will include dust and surface runoff control measures, the use of personal protective equipment (PPE), safe working practices by site construction staff, detailed early planning for the discovery of unexpected contamination, and the implementation of protective measures to ensure the correct storage and transport of hazardous substances.

Summary of significant effects

As a result of the incorporation of the proposed environmental measures, there are expected to be no significant effects related to land quality.

Water Environment Assessment

Baseline information

Baseline information was collected by means of a desk study and site visits. This identified the following important baseline features:

- Surface waters – Llanmaes Brook/Boverton Brook/Hoddnant Stream, Rhyl Stream, Nant Stepsau, River Thaw and local drainage ditch systems (and highway drains);
- Groundwater quality – a minor aquifer (Lower Lias Formation), a major aquifer (Carboniferous limestone) and public water supply (including private water);
- People and their properties on-site and downstream in areas where there is a risk of flooding; and
- Water Quality of Coastal Waters (including the Tresilian Bay receiving effluent from Llantwit Major Wastewater Treatment Works (WwTW) and Limpert Bay receiving effluent from Aberthaw WwTW and the adjacent Severn Estuary.

Environmental measures incorporated

The environmental measures to be implemented which relate to the water environment include:

- Restriction of site run-off to greenfield sites including no direct or uncontrolled/untreated discharges;
- Use of Sustainable Drainage Systems (SuDS) to hold and treat flows before discharging. Furthermore the existing local drainage systems will be improved as a result of the development;
- Siting of new buildings away from (or elevated above) flood risk areas; and
- Implementation of pollution prevention measures, as detailed within the CEMP. This will include the implementation of Emergency Pollution Control measures and standard good practice including related to oil and chemical storage, and refuelling activities.

A Flood Consequences Assessment (FCA) has been prepared to identify potential areas at risk from flooding. The FCA indicates measures which have been incorporated into the design of the

development to ensure that there will be no increase in the likelihood of flooding affecting existing properties as a result of the development.

Summary of significant effects

The implementation of environmental measures incorporated within the design proposals will ensure that there will be no significant effects on the water environment.

Community Assessment

Baseline information

Baseline information was collected through desk study and by consultation with relevant organisations including the VoGC. This exercise identified the following important baseline receptors:

- The local economy;
- The wider south-east Wales economy; and
- The local community, including the residents of the Vale of Glamorgan and most specifically the settlements of St Athan, Llantwit Major, Llanmaes, Boverton and Rhoose.

Environmental measures incorporated

The environmental measures to be implemented which relate specifically to the community include:

- The provision within the development of a wide range of community and leisure facilities which can be used by the general public. These include sports facilities, a community centre, St Brise Church (which will be restored for ceremonial use and quiet contemplation) and a faith centre;
- The provision of an on-site job shop and Vale Jobcentre Plus during the construction phase, through which local construction labour will be recruited; and
- Provision of GP services for military personnel and their families. Dental services will also be provided for military personnel. This will avoid an increased demand being placed on existing services in the Vale of Glamorgan.

Summary of significant effects

The proposed developments will result in a number of positive significant effects on the local community. During the construction phase for both developments (from 2009 to 2028), a significant number of additional job opportunities (approximately 950 full time equivalent (FTE) jobs over the whole construction period) will be created which could be taken up by residents of the Vale. These jobs will be sustained throughout the construction period. During their operation both developments together are expected to create approximately 5,628 additional direct and indirect jobs, with the ABP also attracting much new business to the local area.

Furthermore, through the developments, and specifically because of the increased number of military personnel that will live (or stay) at St Athan, spending in the local area will increase significantly, thus benefiting existing businesses.

Traffic and Transport Assessment

Baseline information

Baseline information was collected by means of a desk study, site surveys and analysis of the Transport Assessment (TA) and the Travel Plan produced by Capita Symonds Ltd. The following important baseline information was collected:

- The main access to MoD St Athan is the West Gate, which is directly accessed off the B4265. Site access at the East Gate is via Cowbridge Road, St Athan;
- Eglwys Brewis Road runs around the north of the site runs and intersects with Cowbridge Road and the B4265, on route to Boverton;
- The A48 is the nearest Strategic Road, some 6km to the north of the site. The A48 connects Cardiff in the east and Bridgend in the west and has connections through to the M4;
- The application site is currently served by four bus routes which provide links to Barry, Bridgend, Cardiff, Llantwit Major, Llantwit Major Railway Station and Rhoose;
- Llantwit Major Railway Station, which links Cardiff and Bridgend and calls at Grangetown, Cogan, Eastbrook, Dinas Powys, Cadoxton, Barry Docks, Barry and Rhoose, provides modern interchange and park-and-ride facilities;
- A free shuttle bus (Service 905) connects Rhoose Railway Station to Cardiff Airport. Services at the station connect to Cardiff and Bridgend and therefore interchange with the national rail network;
- A cycle link runs from Llantwit Major to West Gate, via Boverton Road; and
- 20 accident cluster sites have been identified. These sites are located between Pentre Meyrick and Llantwit Major, to the west of St Athan, and Barry and St Nicholas, to the east of St Athan. Driver error was the predominant causal factor at each site.

Environmental measures incorporated

The environmental measures which have been implemented which relate specifically to the traffic and transport assessment include:

- A CEMP to minimise adverse environmental effects as a result of the construction processes;
- A Construction Travel Plan to encourage accessibility of the site by alternative modes of travel to the car;
- Highway works to improve road safety, access to the site and capacity at critical junctions;

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- Access junction design to ensure that traffic through/from St Athan will not enter the DTC and ABP off Eglwys Brewis Road;
 - Signposting and bus-friendly traffic calming on Eglwys Brewis Road to reduce 'rat-running';
 - Replacing a section the existing Eglwys Brewis Road with the Northern Access Road (NAR) and improvements to other sections;
 - Provision of a lay-by for abnormal loads adjacent to Gates 2 and 3;
 - A Southern Access Road to serve ABP South; and
 - DTC and ABP Travel Plans to encourage trips to/from the proposed development by modes of travel other than single-occupancy car use.

Summary of significant effects

With the implementation of the proposed environmental measures it is considered that there will be no significant negative effects on traffic and transport as a result of the development.

Air Quality Assessment

Baseline information

Baseline information was collected by means of a desk study and air quality monitoring. The information gathered identified that the VoGC has not declared any Air Quality Management Areas (AQMAs) in the local area as part of the air quality management review and assessment process. Furthermore, there is currently no continuous monitoring of air quality undertaken in the area around St Athan. The closest monitoring site is in Rhoose, Barry. Particulate matter (PM₁₀) monitoring is undertaken but only close to Cardiff Airport. A review of this information showed that there were no exceedences of the Air Quality Objectives (AQOs) for PM₁₀ during 2008.

A baseline study of NO₂ concentrations was also conducted to inform the assessment. The results indicated that air quality in the area surrounding the site does not exceed the AQOs for the area.

Environmental measures incorporated

The environmental measures to be implemented which relate specifically to air quality include:

- Incorporation of abatement technology within the Energy Centre to reduce emissions to air. In addition, clean fuel using locally produced wood pellets, will also be used; and
- Implementation of best practice measures outlined in the CEMP to minimise the creation of dust on-site and to ensure that whatever dust is generated does not migrate off-site.

Summary of significant effects

With the implementation of the proposed environmental measures it is considered that there will be no significant effects on air quality as a result of the development.

Odour Assessment

Baseline information

The odour baseline for and surrounding the site is mainly influenced by the current aircraft activity at St Athan. Specifically, odour at the site is a result of the combustion of aviation fuel by aircraft. There have, however, been no previous complaints associated with odour as a result of the historical operation of the site.

The current odour baseline at and surrounding the Llantwit Major WwTW is, as would be expected, mainly influenced by the operational processes of the works themselves. Specific odour sources include the inlet works, sludge treatment facilities, the aeration system and the final settlement tanks. Despite this, Entec has not been made aware of any odour complaint related to the operation of the Llantwit Major WwTW.

Environmental measures incorporated

The environmental measures implemented which relate specifically to odour include:

- The replacement of Llantwit Major WwTW current treatment processes; and
- A site-specific odour management plan at the WwTW which will include regular checking of the systems.

Summary of significant effects

With the implementation of the proposed environmental measures it is considered that there will be no significant effects from odour as a result of the development.

Noise Assessment

Baseline information

Baseline information was collected by means of a series of noise surveys, the methodology for which was developed in consultation with the Pollution Control Department at VoGC. A total of 31 locations were monitored over periods of 3 hours for up to 7 days. The noise baseline data indicate that the daytime noise levels around the site are mainly influenced by the current aircraft activity at the site and existing traffic using the roads in the area. Engine running was not carried out during the initial baseline survey, and so additional data to characterise noise due to engine running was gathered during a separate survey in February 2008. Noise models were then developed to predict future baselines to reflect changes in the noise environment if the development did not go ahead.

Environmental measures incorporated

The environmental measures to be implemented which relate specifically to the noise and vibration assessment include:

- Limitation of construction operations to weekday and Saturday daytime, adoption of a Noise Management Plan and registration with the Considerate Constructors Scheme;
- Construction of 10m-high noise barriers to the north, south and east of the engine running facility, with no significant noise-generating activities to be undertaken during the sensitive periods of the night;

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- Acoustic bunds and a 3m-high acoustic fence to be erected in and around the Picketston field training area, with no significant noise-generating activities to be undertaken during the sensitive periods of the night. There will be an enclosed firing range (four sides but no roof);
 - Design of the Energy Centre to ensure that background noise level thresholds are not exceeded at the nearest residential receptor. All mechanical services associated with on-site uses will be designed to be at least 5dB(A) below measured background noise levels at the nearest sensitive receptors; and
 - Design of external building envelopes for all affected on-site proposed uses to meet relevant internal design noise criteria.

Summary of Significant Effects

The incorporation of environmental measures into the scheme has addressed the majority of the negative effects associated with the noise and vibration environment. Indeed, there are positive effects at many receptors due to the changes brought about by the development.

There are some significant negative noise effects that will occur as a result of road traffic noise to properties immediately adjacent to the new northern access road, to some properties fronting Cowbridge Road through Eglwys Brewis village, and certain properties in St Athan village.

In addition, a few isolated properties near to Picketston Field Training Area, DTC training activities, and engine running operations will experience significant effects from the nearest activities.

A copy of the full Environmental Statement (ES) can be viewed at the Vale of Glamorgan Council offices at the following address:

Vale of Glamorgan Council
Dock Office
Barry Docks
Barry
CF63 4RT

A CD containing the full document can also be obtained from the above address free of charge.