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Land at and adjoining MoD St. Athan in the Vale of Glamorgan, extending from the B4265 at Boverton in the west to Castleton Farm, St Athan, in the east, and from north of the runway and north of Castleton Road at St Athan in the south to land at the northern end of the MoD St Athan site at Picketston and up to Flemingston Road, St Athan, in the north; together with land adjoining the B4265 near Gileston and land at Waycock Cross, Barry.

Development of a Defence Technical College and associated facilities and works, including 483 Service Families' Accommodation dwellings, military external and field training areas, the alteration and reconfiguration of St Athan golf course, a hotel, an energy centre, improved parking and servicing facilities for the existing spar shop on Eglwys Brewis Road, the provision of a new access road and other associated highway works and improvements, including a garage for Rose Cottage, and all associated ancillary building, sports, community, ecological mitigation and enhancement, engineering, landscaping, means of enclosure and other works.

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GLOSSARY OF TERMS

4SofTT	No. 4 School of Technical Training
AAR	Airport Access Road
ABP	Aerospace Business Park
ADMS	Atmospheric Dispersion Modelling System
ALC	Agricultural Land Classification
AM	Assembly Member
AMP	Asset Management Plan
ANIS	Aircraft Noise Index Study
AOD	Above Ordnance Datum
AONB	Area of Outstanding Natural Beauty
AQAP	Air Quality Action Plan
AQMAs	Air Quality Management Areas
AQOs	Air Quality Objectives
AQS	Air Quality Standards
ASA	Amateur Swimming Association
ATC	Air Traffic Control
ATC	Automatic Traffic Count
ATMs	Aircraft Taxiing Manoeuvres
BAP	Biodiversity Action Plan
BFI	Base Flow Index
BGS	British Geological Society
BoCC	Birds of Conservation Concern
BMV	Best and Most Versatile (agricultural land)
BPM	Best Practicable Means
BRE	Buildings Research Establishment
BREEAM	Buildings Research Establishment Environmental Assessment Method
BS	British Standard
BSBI	Botanical Society of the British Isles
CAA	Civil Aviation Authority
CAMS	Catchment Abstraction Management Strategy
CAP	Civil Aviation Policy
CC	Community Council (various)
CCW	Countryside Council for Wales
CEMP	Construction Environmental Management Plan
CES	Community Engagement Statement
CFMP	Catchment Flood Management Plan
CHP	Combined Heat and Power
CIRIA	Construction Industry Research and Information Association
CMS	Construction Method Statement
CO	Carbon Monoxide
CPO	Compulsory Purchase Order
CRoW Act	Countryside and Rights of Way Act
CRTN	Calculation of Road Traffic Noise
cSINCs	candidate Sites of Importance for Nature Conservation
CSH	Code for Sustainable Homes
CSP	Core Strategic Policy (draft LDP)
CTP	Construction Travel Plan

DARA	Defence Aviation Repair Agency
DAS	Design and Access Statement
DCfW	Design Commission for Wales
DCWW	Dwr Cymru Welsh Water
DDA	Disability Discrimination Act (1995) and (2005)
DE	Defence Estates
DEFRA	Department of Environment, Food and Rural Affairs
DETR	Department of the Environment, Transport and the Regions
DfT	Department for Transport
DMRB	Design Manual for Roads and Bridges
DSG	Defence Support Group
DTC	Defence Technical College
DTR	Defence Training Review
EAIR	Environment Aspect and Impact Register
EAW	Environment Agency Wales
EDR	Environmental Damage Regulations
EHO	Environmental Health Officer
EIA	Environmental Impact Assessment
EIR	Economic Impact Report
EM	Electromagnetic
EMP	Environmental Management Plan
Enviros	Enviros Consulting (formerly Enviros Aspinwall) consultant to DE
EPA 1990	Environment Protection Act 1990
EPR	Environmental Permitting Regulations
EQS	Environmental Quality Standard (for water)
ERCD	Environmental Research and Consultancy Department
EROM	European Reference Odour Mass
ES	Environmental Statement
EU	European Union
EU-ETS	EU Emission Trading Scheme
EWS	Emergency Water Supply
FCA	Flood Consequence Assessment
FCS	Favourable Conservation Status
FEH	Flood Estimation Handbook
FIT	Fields In Trust (previously National Playing Fields Association)
FM	Facilities Management
FOD	Foreign Object Damage
FST	Final Settlement Tank
FTA	Field Training Area
FTE	Full time equivalent
GCN	Great Crested Newt
GGAT	Glamorgan Gwent Archaeological Trust
GIS	Geographical Information Systems
GLVIA	Guidelines for Landscape and Visual Impact Assessment
GPMG	General Purpose Machine Gun
GPS	Geographical Positioning System
GPU	Ground Power Unit
GQA	General Quality Assessment, for measuring water quality in river
HAP	Habitat Action Plan
HEC-RAS	A one dimensional hydraulic modelling software (River Analysis System) developed by the Hydrologic Engineering Centre
HER	Historic Environment Record

HGV	Heavy Goods Vehicle
HNA	Health Needs Assessment
HVCZ	Highway Verge Conservation Zones
HVE	High Vacuum Extraction
IEEM	Institute of Ecology and Environmental Management
ILE	Institute of Lighting Engineers
INM	Integrated Noise Model
ISO	International Standard Organisation
JSP	Joint Services Publication
LA50/LA10	Noise level exceeded for 50% and 10% of the measurement period respectively
LA90 index	represents the noise level exceeded for 90 percent of the measurement period
LAE	is a measure of sound energy
LAeq	the equivalent continuous sound level
LAmaz	maximum recorded noise level during the measurement period
LAP	Local Areas for Play
LAQM	Local Air Quality Management
LBAP	Local Biodiversity Action Plan
LDP	Local Development Plan
LEAP	Local Equipped Area for Play
LEAP	Local Environment Action Plan
LGV	Large Goods Vehicles
LHB	Local Health Board
LNAPL	Light Non-Aqueous Phase Liquid
LNR	Local Nature Reserve
LPA	Local Planning Authority
LQA	Land Quality Assessment
LRC	Learning Resource Centre
LTO	Landing and Take-off cycle
LZC	Low and Zero Carbon
MIPPS	Ministerial Interim Planning Policy Statement (various)
MNA	Monitored Natural Attenuation
MOD	Ministry of Defence
MPH	Miles Per Hour
Mppa	Million passengers per annum
MRO	Maintenance, Repair and Overhaul
MT	Mechanical Training (Workshop)
MTHW	Medium Temperature Hot Water
NAAFI	Navy, Army and Air Force Institute
NAR	Northern Access Road
NERC	Natural Environment and Rural Communities
Netcen	National Environmental Technology Centre
NGR	National Grid Reference
NLUD	National Landuse Database
NMoW	National Museum of Wales
NMP	Noise Management Plan
NMVOC	Non methane Volatile organic Compounds
NNR	National Nature Reserve
NO2	Nitrogen Dioxide
NOX	Nitrogen Oxides
NR	Network Rail

NRTF	National Road Traffic Forecast
NSCA	National Society for Clean Air (now know as Environmental Protection UK)
NTS	Non-technical summary
NVQ	National Vocational Qualification
OCU	Odour Control Unit
OFQ	Officers' Families' Quarters
OHMP	Outline Habitat Management Plan
ONS	Office of National Statistics
OS	Ordnance Survey
OUE	European odour unit
PAAB	Potential Artificers Assessment Board
PAH	Polycyclic Aromatic Hydrocarbon
PB	Parsons Brinckerhoff (the Council's appointed transport consultants)
PCO	Pollution Control Officer
PIA	Personal Injury Accident
PM10	Particulate matter with an aerodynamic diameter less than 10 microns
PM2.5	Particulate matter with an aerodynamic diameter less than 2.5 microns
POL	Petrol, oil and lubrication point
PPG	Pollution Prevention Guidance
PPW	Planning Policy Wales (March 2002)
PROW	Public Right of Way
RAF	Royal Air Force
RAF CSSB	RAF Command Support & Scientific Branch
RBMP	River Basin Management Plan
RDB	Red Data Book
REME	Royal Electrical and Mechanical Engineers
RID	Received Incoming Delivery (facilities)
RQO	River Quality Objectives, targets set for river quality by EAW
SACs	Special Areas of Conservation
SAMs	Scheduled Ancient Monuments
SAP	Species Action Plan
SAR	Southern Access Road
SATURN	Simulation and Assignment of Traffic to Urban Road Networks
SEL	Sound Exposure Level
SEWReC	South and East Wales Biological Records Centre
SEWTA	South East Wales Transport Alliance
SFA	Services Family Accommodation
SFG	Special Forces Group
SFQ	Servicemen's Families' Quarters
SGV	Soil Guideline Value
SINCs	Sites of Importance for Nature Conservation
SLA	Single Living Accommodation
SLA	Special Landscape Area
SMs	Scheduled Monument
SNL	Single Noise Level
SO2	Sulphur dioxide
SOAs	Strategic Opportunities Areas
SPA	Special Protection Areas
SPG	Supplementary Planning Guidance (various)

SPS	Sewerage Pumping Station
SPZ	Source Protection Zone
SSSI	Site of Special Scientific Interest
SUDS	Sustainable Drainage Systems
SVE	Soil Vapour Extraction
SWMP	Site Waste Management Plan
TA	Transport Assessment
TAN	Technical Advice Note (various)
TEF	Toxic Equivalence Factor
TIS	Transport Implementation Strategy
TMP	Traffic Management Plan
TPH	Total Petroleum Hydrocarbons
TPO	Tree Preservation Order
TRO	Traffic Regulation Order
TTWA	Travel to Work Area
UDP	Vale of Glamorgan Adopted Unitary Development Plan 1996-2011
UKBAP	United Kingdom Biodiversity Action Plan
UKCIP	United Kingdom Climate Change Impact Programme
UWAS	University of Wales Air Squadron
VGS	Volunteer Gliding Squadron
VMH	Valeways Millennium Heritage Trail
VOC	Volatile Organic Compounds
VOG	Vale of Glamorgan Council
WAG	Welsh Assembly Government (applicant for ABP)
WDA	Welsh Development Agency
WFD	Water Framework Directive
WHO	World Health Organisation
WLGA	Welsh Local Government Association
WO	Welsh Office
WRA 1991	Water Resources Act, 1991
WSP	Wales Spatial Plan
WwTW	Wastewater Treatment Works
WYG	formerly White Young Green (Agent for ABP)
ZTV	Zones of Theoretical Visibility
_g m-3	Microgrammes per cubic metre

1. INTRODUCTION & CONTEXT

In 2001, the Ministry of Defence (MoD) published a report entitled 'Modernising Defence Training'. The report highlighted that:

- Future Defence Training needed to be more integrated;
- Training needed to be managed on a Defence-wide basis to better support the increasing move towards joint deployments; and
- That the training estate needed investment and rationalisation to ensure that the MoD facilities were used efficiently and were fit for purpose.

These recommendations are at the heart of the Defence Training Review (DTR) Rationalisation Programme, which is a large and complex project seeking to transform the way that specialist technical training in the future is delivered.

On 17th January, 2007, the Secretary of State for Defence announced that the Metrix consortium had been selected as preferred bidder for delivering 'Package 1' Training at a new Defence Technical College (DTC) at St. Athan, comprising specialist training for Aeronautical Engineering, Electro-Mechanical Engineering and Communications & Information Systems.

The purpose of the DTC is to provide a rationalised technical training programme that would deliver modern, cost effective training regimes, both indoors and outdoors, to front line commands of all areas of the UK's armed forces. As such, it was established that a modern, purpose-built estate was necessary to replace existing more limited and specialised facilities around the UK and to meet the above objectives. It also gives the opportunity to create a new training estate which is far more efficient and sustainable than much of the existing estate.

In order to meet the requirements of the DTR Rationalisation Programme, a comprehensive site is required that provides, in addition to the operational training and learning facilities, all of the necessary associated developments including living accommodation, medical, sports and recreational, community facilities, places of worship, an energy centre and other associated facilities.

Subsequently, on 12th May 2009, the current outline planning application for the Defence Technical College and its associated developments was submitted to the Council, alongside a separate outline application submitted by the Welsh Ministers for an Aerospace Business Park (ABP) on adjoining land (ref: 2009/00501/OUT). The ABP is being developed around the existing operational runway at St Athan as an aerospace centre of excellence for the maintenance, repair and overhaul of aircraft.

The proposals for the DTC and the ABP have been formulated in tandem due to the provision of common infrastructure and overlap of certain facilities such as the proposed new Northern Access Road (NAR), the existing disused cross-runway and various drainage and utilities infrastructure. However, whilst there are planning issues common to both schemes, the purpose of this report is to provide an assessment of the development as it relates to the Defence Technical College only.

2. SITE DESCRIPTION

The application site comprises land at and adjoining MOD St Athan extending from the B4265 at Boverton in the west to Castleton Farm, St Athan, in the east, and from north of the runway and north of Castleton Road at St Athan in the south to land at the northern end of the MoD St Athan site at Picketston and up to Flemingston Road, St Athan, in the north; together with land adjoining the B4265 near Gileston and land at Waycock Cross, Barry. The extent of the site is shown on the plan at *Figure 1*.

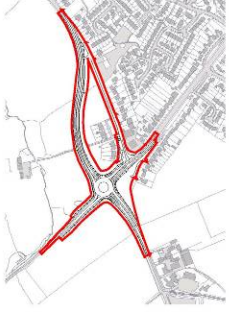
In terms of wider strategic context, the site is located approximately 8 miles west of Barry and 12 miles south-east of Bridgend, approximately 4 miles west of Cardiff Airport and approximately 14 miles south of Junction 33 of the M4.

A large proportion of the development site comprises land allocated by the Unitary Development Plan as (the former) RAF St Athan base, with the remainder of the land surrounding MOD St Athan comprising mainly countryside in agricultural use. In terms of neighbouring settlements, the site lies directly to the north and west of St. Athan, directly across the B4265 to the east of Llantwit Major/Boverton, approximately 0.75km south east of Llanmaes and 0.75km south west of Flemingston. There are a number of farms located in the immediate area including Great House Farm to the north east, Boverton Mill Farm to the south-west and Pant Yr Awel Farm, Rock Farm and Church Farm to the east.

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 for the training college itself is largely occupied by existing development, much of which is either vacant or in a poor condition, with the Super Hangar (also referred to as the Red Dragon Hangar) being the largest existing building, this measuring approximately 175m wide x 325m long. This is currently in use by the Defence Support Group (DSG).

The application boundary, defined above, includes the following main areas of land:

- Land within and adjoining the MoD St Athan site at East Camp, the Super Hangar and Picketston.
- Land at Tremains Farm, land to the north of West Camp and south west of Picketston, and land at Flemingston Road and the northern edge of St Athan Golf Course, required in order to accommodate Service Families' Accommodation (SFA) housing development (see description of development below);
- Land for the proposed Northern Access Road from the B4265, running east to west approximately 250m north east of West Camp.
- Land north of Castleton Farm and directly south east of the St Athan Golf Course;
- Land for the proposed improvement of the B4265 section of road between Gileston and Old Mill;
- Land around Waycock Cross roundabout in Barry



Waycock Cross junction improvements

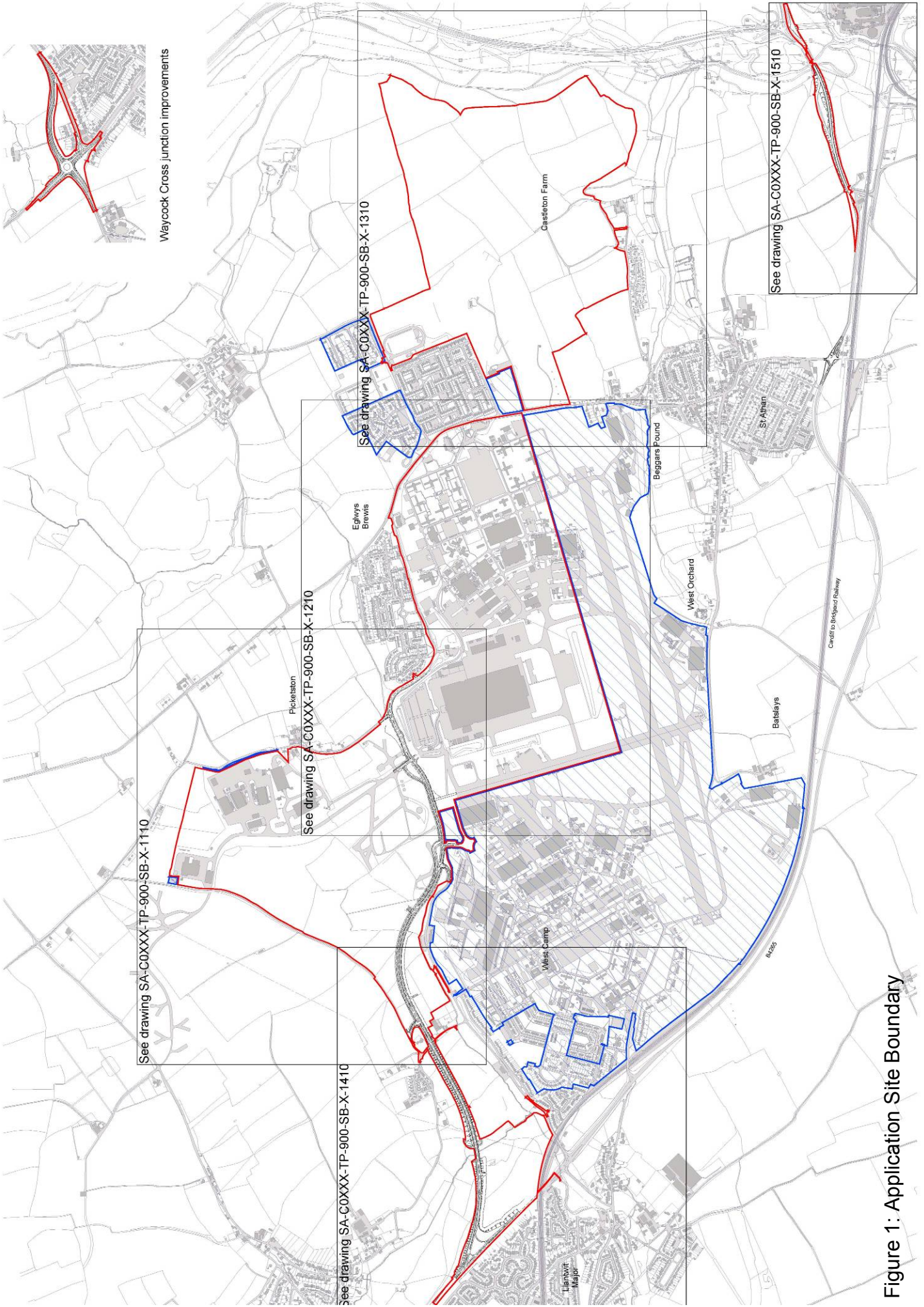


Figure 1: Application Site Boundary

- Land in order to improve a section of Eglwys Brewis Road.

3. DEVELOPMENT DESCRIPTION

3.1 The Proposals

Outline planning permission is being sought for a Defence Technical College and its associated development with all matters reserved, apart from the following elements of the development, for which full permission is sought now:

- The proposed access road to serve the DTC development, with the exception of the highway improvements to the east of the proposed main gate up to Cowbridge Road (Drwg 3622\PA\1514 Northern Access Road Museum Access and Spar Development Junction Details refers - which have been removed from the detailed scheme and will instead be covered as a reserved matter)
- The proposed B4265 highway improvement works between Gileston and Old Mill; and
- The proposed improvement to a section of the existing Eglwys Brewis Road.

For the remainder of the development, the details of the access, appearance, landscaping, layout and scale of the development are reserved for subsequent approval.

Notwithstanding this, the application is supported by an extensive amount of detailed background information on the nature, scale and layout of the proposals for illustrative purposes only. This supporting information not only provides an indication of the likely form of the development, but also summarises the assumptions that have been made as the basis for undertaking the various assessments.

The development as a whole is, therefore, comprised of the following elements:

(Note: references to building dimensions and individual site areas are taken from indicative layout plans and are, therefore approximate/likely scale parameters)

- The use and extension of the existing **Super Hangar** for training purposes;
- A new **Energy Centre** / Combined Heat and Power (CHP) Plant comprising a building approximately 24m in height and a chimney approximately 30m in height, located west of the main hangar (approximately 1600sqm of floorspace)
- A **Museum of Military History**, sited east of the main hangar and main entrance gate.
- **Sports and recreation facilities** west of Picketston, which will be available for use by the public when not required for use by the DTC.

- a **crèche, community centre** and a **150 bed hotel**, to be sited north of the new access road and adjacent to the sports facilities.
- **Single Living Accommodation** (SLA) for visiting trainees and military personnel, located to the east of the main hangar building (approx 124,000sqm of floorspace)
- **Service Families' Accommodation** (SFA) housing for up to 483 personnel and their families, located across 4 different sites, namely:
 - Land at Tremains Farm, at the western end of the site, directly across the B4265 from Boverton (169 units on 8.76 ha)
 - Land north of West Camp (59 units on 3.82 ha)
 - Land at South West Picketston, directly across the new access road from the 'area north of West Camp' (83 units on 4.88 ha)
 - Golf course, east of existing housing on Flemingston Road and directly north of the golf course (172 units on 8.02 ha)
- **Messes**, training buildings, offices, storage, workshops and other associated DTC facilities and buildings, located between the main hangar and the existing East Gate.
- **The Hub** - located to the east of the main hangar, containing shops, bars etc for use by service personnel.
- A **Medical and Dental Centre**, east of the new main access gate (approximately 4400sqm of floorspace)
- New **military church, faith centre** and **temple buildings** and works to prevent the further decline of the Grade II Listed St Brise Church (approximately 735sqm floorspace).
- At Picketston, a **small arms firing range**, an aerial farm where aerials of between 20m and 30m in height will be erected and dismantled for training purposes, a waste compound, obstacle courses, a telegraph pole field, respiration testing facilities, and outdoor training with obstacle courses.
- A **Field Training Area** (FTA) to the east of Cowbridge Road at Castleton, to be used for day and night training and vehicle based training.
- A foul water pumping station to pump the foul sewage from the proposed development to the Llantwit Major Waste Water Treatment Works.
- An electricity primary sub-station adjacent to the main energy centre/combined heat and power plant.
- External parade and training hardstanding areas, to the south of the main hangar.
- A tracked armoured vehicle test road within the site parallel with the main runway;
- Petrol, oil and lubrication point (POL) and vehicle washdown area in the Picketston area.
- Works to the existing **St Athan Golf Course** at Cowbridge Road, including alterations and rearrangement of the course, to account for land within the existing golf course required for Service Families' Accommodation.

- A **Learning Resource Centre**, located south east of the main hangar.
- Landscaping and ecological proposals.
- The following **Highways works**:
 - A new **Northern Access Road (NAR)** from the B4265 to Eglwys Brewis Road, to provide shared access to the Defence technical College and Aerospace Business Park. This includes 0.5km of on-line improvements to the B4265 to construct a traffic signal controlled junction, 1.8km of new carriageway incorporating a new single span bridge over the Llanmaes Brook; and 1.0km of on-line widening improvements to Eglwys Brewis Road, as far as St. Brise Church.
 - realignment and improvements on the B4265 road at **Gileston to Old Mill**, which comprise 0.6km of on and off line improvements and straightening of the highway to improve safety standards of the existing highway. These improvements are located approximately 400m east of the petrol filling station and 350m west of the Llanmaes turning off the B4265.
 - Signal control of the **St Athan/Gileston cross-roads** junction (within the existing highway boundary) on the B4265, incorporating an on-line widening of the B4265 to accommodate additional traffic lanes.
 - **Waycock Cross** road junction improvements, comprising a new roundabout with a 50m diameter and 12m wide circulatory carriageway, realignment and widening of the A4226 Port Road West (west of the junction) to provide three approach lanes, on-line widening of the A4226 Waycock Road (Five Mile Lane) to provide two approach lanes and an amendment within the highway boundary along Pontypridd Road to provide additional approach and exit lanes.
 - Improvement of a section of the existing **Eglwys Brewis Road**, located to the north of West Camp, in order to facilitate access to the DTC site whilst awaiting the completion of the Northern Access Road.

It should be noted that the above is a summary description of the development, and that more detailed analysis of individual components of the scheme are provided in the assessment to follow in this report.

3.2 Supporting Documentation

The application has been submitted with extensive supporting documentation, including: -

- Planning Statement (Sodexo Metrix)
- Design and Access Statement
- Service Families Accommodation (SFA) Design and Access Statement
- Foul Water Drainage Strategy (Joint DTC/ABP)
- Sustainability & Energy Statement
- Surface Water Drainage Strategy (Joint DTC/ABP)
- Waste Management Strategy
- Construction Method Statement
- Computer Generated Photomontage Images (WYG Planning & Design)

- (Joint DTC/ABP)
- Environmental Statement, including Non-Technical Summary (Entec)
- Transport Assessment (Capita Symonds) (plus subsequent “Response to Parsons Brinckerhoff Interim Report – September 2009”)
- Flood Consequences Assessment (Entec)
- Economic Impact Assessment (Entec)
- Community Engagement Statement (Camargue)
- Construction Travel Plan (Capita Symonds)
- Ecology Strategy (Capita Symonds)
- Highway Drawings , including
 - Detailed Engineering and Landscaping Drawings for those highways proposals where detailed approval is sought as part of the application; and
 - Illustrative Engineering and Landscaping Drawings for those highways proposals where detailed approval is not sought at this stage

All submitted documentation in connection with the application has been, and remains, available for inspection on the Council’s website at : http://www.valeofglamorgan.gov.uk/living/planning/planning_applications/defence_technical_college.aspx .

4. RELEVANT PLANNING HISTORY

The application site has an extensive and complex planning history. The full planning history is available for inspection, however, for the purposes of this report, the following applications are considered to be of primary relevance:

- **2002/01244/CROWN** - Integrated Aircraft Maintenance facility.

This application approved the large ‘super hangar’ located centrally within the site, as well as associated offices and facilities.

- **2009/00449/FUL** - 4 School of Technical Training, MoD St. Athan (East Camp), St. Athan

Temporary five year planning permission granted for the relocation of 4 School of Technical Training within MoD St. Athan. Involving the use of existing buildings, the erection of 10 new temporary modular buildings, the extension to an existing building, the construction of a Multiple Use Games Area, and the construction of additional associated parking areas and associated ancillary works. Approved 9th July 2009

- **2009/00735/LBC** – Former Church of St. Brise, Eglwys Brewis Road, St. Athan

This is an application for Listed Building Consent to undertake works to conserve and allow use to be made for quiet contemplation of the building and grounds of the former Church of St Brise, including works of

maintenance and conservation to the churchyard walls, gates and paths.
Approved 16th September 2009.

Given the ecological issues associated with the application site and proposed development, the following application is also considered to be of note:

- **2006/00829/FUL** - Creation of 9 freshwater ponds to support a population of great crested newts - Approved.

5. PRE-APPLICATION

Since the initial involvement of the Council in mid 2005, the Council has held a series of meetings with the applicant and interested parties on the suitability of the proposals. As described above, this resulted in the production of a Development Brief for the site that was formally adopted by the Council in July 2006 following a period of consultation.

Subsequent to the adoption of the Brief, and the announcement of the successful bid in January 2007, the Council as local planning authority has facilitated a series of 'pre-application' meetings with the applicant and promoters of the scheme. Council representatives have also provided advice and, where necessary, feedback on key planning issues as required during the evolution of the current scheme.

These meetings have continued since the submission of the application to ensure that issues raised as a consequence of the submission and consultation are brought to the attention of the applicant in a timely manner.

6. COMMUNITY ENGAGEMENT

A 'Community Engagement Statement' (CES) accompanied the planning application(s), identifying the extent and form of the public consultation programme undertaken by the applicants (and WAG) in respect of the DTC and ABP. This included engaging with a wide range of stakeholders and the local community through a series of public meetings, workshops and interest groups, the use of a 'community website', opinion polls of local residents, and printed press. The Council's own consultation on its Development Brief was also undertaken alongside the consultation exercise undertaken by the applicants' agents.

The CES reports that initial consultations in May 2006 showed opinions overwhelmingly in favour of the proposals 95% of respondents in the opinion poll of 479 residents (1030 out of 1034 comment cards) expressed support for the Defence Technical College. In addition, over 3,000 people signed a petition organised by the South Wales Echo to support the Metrix proposal.

According to the CES, the three primary objectives of the consultation undertaken to date were as follows: -

- To provide clear and up-to-date information for the local community and stakeholders on the emerging masterplan for the development, in advance of submitting outline planning applications for the development, and

detailed planning applications for the Northern Access Road and off site highway improvements at St Athan Junction and Gileston to Oldmill.

- To engage with the local community and provide members of the public and local stakeholders with a number of opportunities to give feedback on the plans, prior to the submission of the planning applications.
- For the consultant team to analyse and, where possible, take on board feedback from the local community in the development of the masterplan.

The document advises that, over the course of their consultation, the consultation team responded to in excess of 300 questions and comments, with constructive feedback taken on board where possible in informing the masterplan. Key areas of concern over the course of the consultation included: -

- **Transport** Potential impact of increased traffic on the local area
General need to improve public transport in the area
Construction of the Northern Access Road
Potential to construct a new train station at or near St Athan
- **Housing** Location of SFA in the west
Impact any new housing could have on local services and infrastructure.
Concern over the potential loss of holes at RAF St Athan Golf Club caused by the development of the Service Families' Accommodation
- **Environment** Potential damage to local wildlife and landscape
Concerns over noise, light and traffic pollution - caused during the construction phase, through the operation of the Defence Technical College/Aerospace Business Park and by the associated increase in traffic.
Potential for new areas of housing to increase local flood risk.
- **Employment** Balance between those who welcomed the opportunities and those who expressed scepticism at the benefits the redevelopment will bring to the area, and that the development will create job opportunities for local people.

The conclusions of the report (section 6) advise that Metrix, the Welsh Assembly Government and the MOD believe that the programme followed constituted a full and comprehensive programme of consultation with good attendance at events and a significant level of feedback.

The report concludes that should the outline planning applications be successful, the feedback received during the consultation programme will help inform subsequent detailed applications for the development.”

In analysing the submitted CES, it is considered to demonstrate that extensive community engagement has been undertaken during the past three years relating to the DTC and ABP developments. The CES advises that this has informed the applicants' understanding of local opinion and concern over elements of the proposals, as well as informing the development of their masterplan for the site.

While the results of the Council's own extensive consultation process are detailed in this report, it is appropriate to note that a number of the representations have expressed concern over changes to the development proposals subsequent to the consultation exercises undertaken by/ on behalf of the applicants. Notably, issues raised refer to the relatively late incorporation of the SFA sites, as well as detailed submission in regard to the objections to the NAR compared with other less harmful routes (according to the submissions).

The CES acknowledges that, during the early part of the consultation programme, it became apparent that there was a frustration that some information was not readily available, such as detailed employment figures or the exact location of houses to be constructed. Whilst it is regrettable that there is concern that such matters were not available at the early stages, it is perhaps understandable that the development of the masterplan for the site, especially the locations of the SFA, required detailed examination and consideration of alternatives, such that their location was not available until a relatively late stage in proceedings. The ongoing discussions by Officers of this Council with the applicants confirm that the precise location of the proposed SFA was not finalised by the applicants until a relatively late stage in proceedings.

While views over the new NAR have been consistent in the applicants' and the Council's own consultation process, nevertheless such matters are addressed in the report below.

In general terms, however, it is considered that the community engagement strategy has been extensive and commensurate with the magnitude of the projects now before the Council for determination, and it has been demonstrated that, where possible, concerns have been addressed in submissions and, where not possible, explanations provided on why such amendments have not been addressed. Members should however note that such a process is non-statutory, and the consultation now carried out by the Council, following receipt of the application, constitutes the necessary statutory consultation.

In any respect, however, the final stage of such community engagement is the formal planning application process, with the results of the Council's own extensive consultation process, reported below.

7. CONSULTATION RESPONSES

As would be expected for an application of this magnitude, significant statutory and non-statutory consultations have been undertaken with an extensive range of public and private bodies, the results of which are summarised below, with samples of the responses provided as Appendices to the report. Members should note that in the majority of cases, most consultee's have responded by one letter to both applications. As a consequence the letters of response are reported

in detail in respect of both this application and that application relating to the ABP, even though elements of the responses may not be relevant to both applications.

Barry Town Council. To date no representations have been received.

Llancarfan Community Council. To date no representations have been received.

Llanfair Community Council. has expressed strong concerns in respect of both developments on the following grounds: -

1. The noise disturbance from the new range and field training area at Picketston (does not apply to 2009/00501/OUT)
2. Increased traffic using the Cowbridge to St Athan Road
3. Increased demand on local amenities
4. The environmental impact which will irrevocably change this part of rural Wales

A copy of their representations are provided in full at **Appendix 1**.

Llantwit Major Town Council strongly object to the planning application for the construction of the new northern access road over open countryside and service housing on green field land. The Town Council would also like it to be noted that they fully support the petition handed into them from the 395 residents from Boverton Road West, living in close proximity to the planning application, of which 95.5% objected to the Northern Access Road and Service Housing. The petition was also handed into the Vale of Glamorgan Council and the Welsh Assembly Government.

St. Athan Community Council

The Council resolved to support the planning application for the Defence Training College. The Council appreciated the efforts made by Metrix and the developers of the scheme to involve the local community in the build up to the planning submission and are pleased that the major concerns the Community Council had about the closure of Eglwys Brewis Road, the impact of housing on the golf course and the availability of community and sports facilities for the local community appear to have been addressed. However there are still issues where the Community Council would wish improvements to be made to the scheme

The response is provided in full at **Appendix 2**, but the key issues raised are summarised as follows: -

Highway Infrastructure

The Community Council urge the Vale of Glamorgan Council to continue to press the Welsh Assembly Government for the completion of the Airport Access Road link to Junction 34 of the M4...benefit the DTC development and reduce the ... problems of rat running through the local villages particularly from the A48 to the college.

The Community Council expects to see a planning condition restricting construction traffic through St Athan village.

Community Services

A significant new community will put considerable strain on existing schools health service provision, dentistry etc. Further investment will be needed by the Vale of Glamorgan Council into these facilities through s106 funding.

Housing

The Community Council are disappointed that the opportunity for providing new housing at Llandow to cater for the DTC requirements has not been taken.

While the Community Council note the expectation for workers and students to walk or cycle from the housing in Flemingston Road, this raises concerns in respect of: 1) the need for parking restrictions on Eglwys Brewis Road; and 2) the pedestrian desire line from the new housing to main gate passes through the unadopted footpaths and roads of the Explorers Estate. These should therefore be adopted or a commuted sum required to pay additional maintenance costs.

Military Provisions

The CC are disappointed that facilities such as the rifle ranges, the tank test track and the Field training areas have not previously been discussed with the Council. The Council is concerned about ensuring that the screening is adequate; that use of the facilities outside the normal working day is restricted wherever possible; and that noise levels be agreed and regularly monitored.

Llanmaes Community Council has provided two extensive representations on the proposals, the first in the form of a Press Release, the second an extensive letter, with both responses provided in full at **Appendix 3**.

Three main objections are raised, these being: -

1. The construction a new NAR across open countryside
2. construction of housing and other buildings on Greenfield land leading up to and beyond this access road
3. noise and disturbance from the new firing range and field training area

The CC strongly urge that further consideration is given to the location of the new Northern access Road, housing and field training site. The CC has received strong representations from residents who are particularly concerned about the visual intrusion of the road, bridge and houses which will take decades to tone in with the rural Vale area, where the majority of people have moved for a quiet, idyllic, rural life, which they thought they had achieved. Added to this is the additional light and noise pollution which they will cause havoc with residents who have retired to the area for medical reasons and a quiet way of life.

The strong objections to the development are briefly summarised as follows: -

Northern Access Road

- The Community Council considers the construction of a new access road across open countryside to be unsustainable in principle and unnecessary, and in conflict with the Welsh Assembly Government's commitment to Sustainable Practices.
- They propose that an alternative dedicated access to the Defence Training College is constructed via a new junction located off the B4265, south of the existing West Camp entrance and linking with the proposed access road for the northern section of the Aerospace Business Park. Drawings to demonstrate such a route have been supplied.
- There was inadequate local consultation about the proposed route of the access road when it was initially suggested in the development brief.
- They strongly object to the specific location of the Northern Access Road in that it will slice through the "Green Belt" between the existing camp and Llanmaes village, reducing this green wedge by nearly a half. This area of countryside provides an important gap, both in visual terms and as a buffer between the noise and activities of the camp and the village

Service Family Accommodation (SFA)

- The objections are based on the take-up of green field land to provide the Service Family Accommodation
- If the proposed housing cannot be accommodated on the camp, then alternative brown field sites should be looked at, such as at Llandow.

Noise from Shooting and Explosives

- The new firing range and field exercise site at Picketson will have an adverse impact on the residents of Llanmaes, Picketston and New Barn.
- Such shooting and explosions can have a disturbing effect on domestic and farm animals as well as having a major impact on the quality of life of the residents of the area.
- It is virtually impossible to reduce the propagation of low-frequency noise, and the proposed acoustic bunding or fences would be of very limited effectiveness for this purpose.
- Such field training and basic shooting training be removed from this site to existing areas (such as Salisbury Plain) where the students would be able to undergo such training, in more realistic surroundings.

Loss of Amenity

- The road will be visually intrusive, with heavy traffic, light pollution from the street lights (some 5m high above the road level), traffic noise, dirt and vibration, resulting in severe loss of residential amenity.
- This road is proposed to bear all the construction traffic causing additional loss of residential amenity for many years. The construction timetable estimates a 6 year programme. If a construction road must be provided, an alternative location must be found.

Archaeology

- Development may permanently negate the possibility of any future archaeological research.

Flooding

- Serious concerns regarding developing fields in view of the likely adverse impact on the existing flooding problems. The area lies in Flood Zone C and in the past there has been serious local flooding in Llanmaes, but more severely in Boverton.

Change of Character of the Area

- This massive development with a population in excess of 6000, new access roads, the widening of the existing by-pass and increased military traffic and noisy activities (such as the firing range and engine testing) will impact severely on the quiet character of the countryside and the town. The development is likely to provide few permanent local jobs but will impact greatly on the local shops, parking, schools, hospitals and other public facilities. It would appear that the developers have given little thought to this impact and have failed to offer the additional facilities that will be needed or any substantial benefits to local people who will have to cope with these changes.

Ewenny Community Council has responded as follows: -

“At the recent meeting of Ewenny community Council grave concerns were expressed concerning the problems likely to be encountered when the Training College is in operation at St Athan. Drivers, particularly those travelling from West Wales to the College, will exacerbate the traffic problems in areas such as our own where there are many narrow country lanes. We feel that attention should be paid to this problem before the College is open. This also applies to neighbouring districts in this rural part of the Vale of Glamorgan”

Llandow Community Council (serving Llandow, Llysworney and Sigginston villages) has responded as follows: -

“I have read the documents relating to the issues raised concerning the development of the Military Training Academy. I wish to refer specifically to the responses relating to Road Improvements (pages 15 and 16 of your 'Transport' document).

You state that your studies show the existing road network from the West will be able to cope with any increase. This is not the case; the infrastructure is already inadequate and raised volumes of traffic will only cause more delay, disruption and danger.

You state that the long-standing problem of Llysworney's traffic has “not warranted the building of a bypass to date”. This is an extremely unfortunate and inaccurate use of language. It is both a lack of funds and a lack of will from the

Vale Council that has delayed the bypass. I strongly dispute your claim that the incremental effect of St Athan traffic will be relatively minor. I urge you to relook at this issue before making sweeping statements like those that appear in your written responses.”

Environment Agency Wales has raised no objections to the development, and has provided technical responses to those matters within their statutory remit. A copy of their response is provided in full at **Appendix 4**.

Countryside Council for Wales (CCW) has advised in their consultation response that they welcome the commitment to the conservation and enhancement of biodiversity proposed in conjunction with these developments and recognise the extensive ecological work to date. Their primary comments relate to the European Protected Species on site, (those species listed on Schedule 2 of the Conservation (Natural Habitats, &c.) Regulations 1994), most particularly great crested newts, bats and dormice.

CCW consider that the submitted reports, together with subsequent information provided by letter dated 28th August 2009 letter, provide an adequate basis upon which to make an informed assessment of the likely impact of the proposals on the favourable conservation status (FCS) of the species concerned. Although they state that they still have a number of outstanding concerns, they consider it should be possible to address these concerns through the application of appropriate conditions (see response in full for details) or other agreements attached to any permission, such that they have no objection.

A copy of their responses are provided in full at **Appendix 5**.

Glamorgan Gwent Archaeological Trust (GGAT) have been heavily involved in the archaeological assessment of the proposals, including requiring upfront evaluation works in respect of potentially nationally important archeologically findings, in the approval of a design for such works, and in reporting on the findings of such pre-determination site evaluation work.

GGAT have provided reports on their archaeological monitoring of site investigation works throughout August/ September, and have provided a final consultation response which confirms that the archaeological assessment and evaluation has provided sufficient information for the impact of the proposed development on the archaeological resource to be determined, and that there are no archaeological constraints to the positive determination of the application, subject to two suggested conditions.

A copy of their final representations are provided in full at **Appendix 6** (with copies of their inspection reports available on file).

Council Protection of Rural Wales. To date no representations have been received.

Cadw, Ancient Monuments has offered no objections, noting that they have been party to consultees meetings and provided feedback on the ES. Accordingly, they have provided comments, limited to two issues, these being the potential effect of the development on the setting of the scheduled ancient

monuments in the vicinity of the development; and the adequacy of the Historic Environment chapter and its proposed mitigation strategy in the Environmental Statement. Their comments are summarised below: -

1. Three scheduled ancient monuments lie adjacent to the development site, West Orchard Manor House (GM083), East Orchard Manor House (GM082), and Deserted Medieval Village North East of Rock Farm (GM307), and consideration needs to be given on the potential impact of the proposal on their setting. In this respect they advise that any effects on the setting of the former would be slight, with no effect upon the setting of the latter two monuments.
2. During its review of the twentieth century military structures, Cadw has identified the Airfield Ground Defences at RAF St Athan as being of national importance. Following extended discussions between Cadw and Entec, 28 out of 30 structures making up this system will be retained in the development. The battle headquarters and adjacent pillboxes will be refurbished and managed public access will be created. Elsewhere, other pillboxes can be modified to provide bat roosts. If planning permission is granted for this development, Cadw will consider whether to afford the 28 structures to be retained, statutory protection under the Ancient Monuments Archaeological Areas Act 1979.
3. Adequacy of the Historic Environment Chapter within the Environmental Statement - In Cadw's opinion, the archaeological evaluation and Historic Environment chapter have been carried out to a high standard and is in line with the Welsh Assembly Government's guidance. The results of required field evaluation work are requested to be provided to Cadw.

Dwr Cymru Welsh Water has commented as follows (summarised):

"Discussions have been ongoing between Dwr Cymru Welsh Water (DCWW) and the Welsh Assembly Government (WAG) for some time now. During that time the scope of the development has been constantly evolving due to refinement of the development details, and in order to reflect the client's requirements. As such we have been restricted in the progress that we could have made.

However, we are confident that the site can be serviced with sewerage and potable water infrastructure as soon as the scope has been fully defined.

In order to clarify the full position we will comment in each aspect individually.

Foul Sewerage

An outline scheme report to serve the development was issued to the WAG in February 2009 by DCWW. Since this time the development scope has changed to such an extent that the strategy requires review and amendment. We have provided a proposal to the WAG for this which is currently awaiting their approval. Given these comments, it is extremely difficult for us to suggest anything other than general conditions for inclusion in the planning consent.

We would note that the off-site drainage scheme will be developed over time which would allow a more defined approach. We will keep your council informed of any developments so that any relevant amendments to the planning consent can be made if possible.

Recommended conditions include the need for:

- A scheme for off-site foul sewerage infrastructure to serve the development to be implemented in full prior to any beneficial occupation
- Pre-commencement condition relating to the preparation and approval of a scheme for the comprehensive and integrated drainage of the site showing how foul water, surface water and land drainage will be dealt with
- Foul water and surface water discharges to be drained separately from the site.

Surface Water

“We have had no detailed discussion with the developer as to their approach to the surface water generated by the development. However we would assume that given the nature of the land and presence of watercourses, all surface water would be dealt with on site. We would hope to see that particular attention has been given to the use of sustainable drainage within the design of any structure or drainage system.

It should also be noted that any developed drainage strategy or scheme has been developed in accordance with the most up to date development scope. It would appear that the current strategy may have been developed in accordance with out of date development proposals.”

As with the foul drainage they recommend conditions including: -

- No Surface Water generated by the development hereby approved shall communicate directly or in-directly with the public foul/combined sewerage system.
- A scheme for the off-site surface water sewerage system shall be implemented in full prior to any beneficial occupation

Potable Water Supply

“As you will be aware there is insufficient capacity in our potable water supply network. We therefore require that sufficient upgrades are carried out in line with water supply required for the development.

Discussion as to the rate of supply have been ongoing and in depth. An initial assessment of water supply demands and the scope of the associated upgrades was supplied to the developer in May 2009. Since that date it appears the required rate of supply has been overestimated and needs to be revised accordingly. We are now awaiting further information from the developer, in order that our report can be amended.

Despite the above, we would like to offer the following condition for inclusion within the planning consent.

“A scheme for off-site water supply to serve the development shall be implemented in full prior to any beneficial occupation occurring on the development hereby approved, and shall be approved in writing by the local planning authority in conjunction with Dwr Cymru Welsh Water.”

Reason: To ensure an adequate supply of water can be provided to any development and to ensure that a supply is maintained to any existing customers.

As with the foul strategy, in order that any suggested conditions can be amended, we will keep your council informed of any changes to the proposed scheme.

If any of the suggested conditions are not acceptable to you please contact us immediately to discuss. If we are unable to agree on a suitably worded condition, in order to safeguard our customers and the environment, we may be forced to object to the development, this is something we wish to avoid.”

A copy of their letter is provided in full at **Appendix 7**.

Network Rail

Note that they have been served Notice by the applicant that part of the proposal site is on Network Rails land, and that the applicant will need to reach agreement with Network Rail’s Operational Portfolio Surveyor, as to whether or not this will be acceptable to our estates department.

They also note the outline application includes other highway proposals, in respect of which detailed permission is not sought at this stage, namely: the proposal for a new access road to ABP south at Batslays (called the Southern Access Road) which will entail the construction of a new junction on the B4265 and a new railway crossing; as detailed plans have not been submitted we are unable to supply comments at this stage to confirm support or objection to this part of the proposal to cross the railway. Network Rail will have to give technical approval of any bridge design that crosses the operational railway.

Whilst they raise no objection in principle to this proposal, they have advised of the need to address matters including fencing (trespass/ safety issues); drainage (to avoid additional or increased flows of surface water onto Network Rail land); safety; ground levels; site layout issues; noise, vibration and airborne dust; landscaping and plant, scaffolding and cranes.

SEWTA and SEWTA Travel Plan Co-ordinator. To date no representations have been received.

South East and West Wales Wildlife Trust. To date no representations have been received.

Ministry of Defence has no safeguarding objections to this proposal providing the applicant adheres to a number of specific criteria, and requests that they are consulted again once formal plans have been finalised to allow the MOD to complete a full technical assessment.

Civil Aviation Authority advises that “without any detail on the proposed developments, Cardiff Airport is unable to assess the impact on flight safety and has no comment. However we would require to be consulted when, or if, the application reaches the full planning stage, which will enable Cardiff Airport to carry out a full assessment of the impact on flight safety”.

South Wales Police. To date no representations have been received.

Barry Police. To date no representations have been received.

Planning and Asset Management (UHW). To date no representations have been received.

South Wales Fire and Rescue Service has no further observations on the matter at this stage. However, as a part of the application concerns ‘Crown’ premises, this information has been forwarded to the Welsh Assembly Government fire policy unit for their information.

Arriva Trains Wales

“Thank you for including Arriva Trains Wales in both these consultations. Our main interest in the Development concerns trains service capacity and therefore we have no formal comments to make on the planning applications. As an aside, I should like you to know that we have fed into the process for train service capacity through WAG via the consultants Capita Symonds and Arup.”

Vale of Glamorgan Local Health Board

“... the LHB advises that the Vale of Glamorgan Council supports any recommendation that either or both developers commission a full Health Impact Assessment if this is deemed necessary”.

Design Commission for Wales - Although not officially consulted on the application, the applicants have presented their scheme to the DCfW Review Panel on more than one occasion, and have expressed a desire for a coordinated design approach for the scheme as a whole. They have also stated that they are primarily concerned with the establishment of an organising framework for connecting and relating the principal buildings and public spaces, and secondly with the character and form of the component parts. In this respect, they consider the framework should inform and direct the emerging designs for the individual buildings and deliver a robust, consistent and coherent public realm strategy, which would deal with connections, spaces, edges and landscape in its widest sense.

Within this context, design reviews are proposed to take place every 2 months, to address detailed matters including:

1. An updated Corridor Study including a full landscape and public realm strategy, to include all three elements of the Defence Training Academy, Service Family Accommodation and Aerospace Business Park. Also to include views onto the site from various local vantage points, including the coastal path and the new northern access road.

2. The main entrance zone – Gate 1 – and the world faith buildings
3. The REME museum
4. The Picketston Sports Facilities, Energy Centre and RID building
5. The four residential areas – urban design principles and layout.

Bridgend County Borough Council has no objection subject to Bridgend Council Highway Officer's negotiating with Vale of Glamorgan Highway Officers regarding the impact of increased traffic movements on the highways within Bridgend Council.

Note: Such matters are addressed in the Transport and Traffic section of this report.

Cardiff County Council. To date no representations have been received.

Rhondda Cynon Taff CBC. To date no representations have been received.

Head of Visible Services (Highway Development) have provided representations on matters relating to pre-application discussions, options and highway design. A copy of their response is provided in full at **Appendix 8.**

Public Rights of Way Officer advises as follows: -

The application site is crossed by several Public Right of Ways shown on the Definitive Map as Public Footpaths Nos. 16 and 17 Llanmaes, Public Footpath No 6 St Athan, Public Footpaths No's 40 Llantwit Major and Public Footpaths No's 9 and 11 St Athan.

Public Footpath No 6 St Athan

This is an important right of way as it forms the back bone of a figure of 8 network of public rights of way and adopted highway. It is understood that the agricultural land crossed by Public Footpath No 6 St Athan is to be used for military exercises, but there appears to be no detail as to how walkers will be protected when using this right of way during these exercises. The extinguishment of this path or temporary closure of this path would be unacceptable due to its importance of linking southern rights of way around St Athan. At this time it is not known whether a diversion would be acceptable to the proposal.

Public Footpaths No's 9 and 11 St Athan

The alignment of Public Footpath No 9 St Athan is incorrectly shown on the application plans and the correct alignment of the definitive path is shown on the attached plan. It appears from the plans for a new section of road that provision has been made to provide a crossing for these two paths by the removal of the dangerous bend. However we do have concerns that the road traffic will be faster under the new arrangements and this will increase danger for walkers crossing the road at this point. Consideration should perhaps be given to a safer crossing. Further along this road there have already been several fatal traffic accidents.

Public Footpath No 40 Llantwit Major

There are concerns that the new junction for the new road will create further safety issues with regard to speed and the safety of walkers crossing the road. It is unclear from the plans whether a safe reserve is planned for the middle of the road.

Public Footpaths Nos 16 and 17 Llanmaes

It is understood that the land affected by Public Footpaths Nos 16 and 17 Llanmaes will have a new highway constructed on it and at a later date dwellings either side of it and that it is intended that the paths are to be diverted under Section 247 of the Town and Country Planning Act 1990 by the highway section. Diversions need to put in place rather than extinguishments as it is important to keep the link between Llanmaes and St Athan.

Additional comments were made regarding general improvement to the PROW network in the vicinity of the site which are considered in detail within the Section 106 issues part of this report.

Head of Economic Development (joint response from Business Support Team, Rural Regeneration and Urban Regeneration)

“The opportunities that the DTC could bring to the Vale of Glamorgan are significant and diverse. It is the largest inward investment seen in the Vale and has the ability to impact upon a variety of aspects of life in the Vale of Glamorgan. It has the possibility to create significant numbers of jobs which hopefully the local workforce will be able to benefit from.

As a result of the project delivering the numbers of jobs expected, the spend power of the METRIX employees will stimulate the local economy. As such, the proposal is to be welcomed in principle.

Other issues raised, in summary, concern: -

- The knock on effect on local services in towns and villages to accommodate the changes in demand, and the need for Investment in public services.
- Desire to see links between Metrix and Creative Rural Communities staff to identify potential opportunities for new business creation
- Any section 106 monies available could prove to be invaluable in terms of adding value through match funding for rural projects.
- A strategic approach should be taken to apportioning S 106 monies. For example, Barry, the Vale’s principal town centre is still in the process of regeneration and a project such as the METRIX DTC should be utilised to keep this regeneration scheme on track as employees and locals directly affected by METRIX will undoubtedly benefit from any further regeneration in Barry itself.
- Consideration should be given to transport linkages. The Barry-St Athan area jointly forms an important strategic opportunity for regeneration which, within the context of the Wales Spatial Plan, will benefit further afield.

- Conditions were requested to cover matters such as the commitment to the establishment of a job shop / local labour recruitment strategy (as per ENTEC submissions)

Head of Economic Development (Ecology) has no objections but advises as follows: -

REPTILES - The submitted applications include survey reports and proposals for mitigation and compensation with respect to reptiles. However, the ecology team do not feel that the wording is sufficiently rigorous and therefore it is recommended that a condition be attached requiring the submission of a scheme to mitigate and compensate for impact on reptiles and their habitat to the local authority for approval prior to the commencement of works and thereafter be fully implemented. This to comply with policy ENV 16 (protected species) of the UDP.

NESTING BIRDS - The buildings and vegetation on the application sites have been recorded as in use by nesting birds. It is recommended that to comply with the law, a condition be included in any consent that states that any vegetation clearance should be done outside the nesting season, which is generally recognised to be from March to August inclusive, unless it can be demonstrated through submission to the Local Planning Authority of an appropriate survey immediately prior to works commencing that nesting birds are absent or a method statement for works is agreed in writing with the local planning authority and fully implemented.

EUROPEAN PROTECTED SPECIES - The submitted reports detail the presence of a number of European protected species (bat species, otter and dormouse) and their usage of the application site as a breeding site or resting place. It will therefore be necessary for the developer to apply for derogation (development licence) from the WAG.

As a competent authority under the Habitats Regulations 1994, the LPA must have regard to the Habitats Directive's requirement to establish a system of strict protection and to the fact that derogations are allowed only where the three conditions under Article 16 of the Habitats Directive are met (the three tests).

- i) There is no satisfactory alternative
- ii) The derogation is not detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range
- iii) The derogation is in the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment

In order to comply with its duty under the Habitats Regulations, the LPA will need to take all three tests into account in its decision (Judicial Review, Woolley vs Cheshire East Borough Council 2009).

CCW have advised that (if conditions are attached as they recommend) CCW would have no objection to either of the proposals.

Following WAG guidance the following should be attached as an informative (II037):

Where any species listed under Schedules 2 or 4 of the Conservation (Natural Habitats & c.) Regulations 1994 is present on the site, or other identified area, in respect of which this permission is hereby granted, no works of site clearance, demolition or construction shall take place unless a licence to disturb any such species has been granted by the Welsh Assembly Government in accordance with the aforementioned Regulations

When applying for their licence, the applicant will send a copy of the local authority consultation document (part of the WAG application) to the planning officer. This form requests details from the LPA to show that the three tests have been met and considered as part of the planning decision and forms a record of the LPA's compliance. In the event of police investigation, such records could provide valuable evidence that the LPA has exercised due diligence.

Head of Environmental Health (Pollution Control) has provided extensive comments offering no objections on environmental grounds. In summary, the comments offered are as follows: -

1. Environmental Management Plan (EMP)

Pages 3-15 & 16 of volume 1 of the ES listed 17 actions to be included under operational control and this is acceptable. This should be agreed by this authority prior to start of any beneficial operation.

2. Construction Environmental Management Plan (CEMP)

This should be agreed by this authority prior to construction work starting and apply to all elements of the development. It must include methods for the control of

- noise and its mitigation (also where appropriate reference to BS5228)
- vibration and its mitigation
- specific requirements for the mitigation of any piling operations
- dust control and list of permitted mobile crushers and screens
- agreed hours for the undertaking of 'noisy' works
- As some of the above working hours will be in darkness during winter months lighting of the working area was not addressed but should be, since misaligned light beams are subject to nuisance legislation

3. Operational Noise Plan

Table 16.61 of Volume 2 of the ES is acceptable. This should be agreed by this authority prior to start of any beneficial operation. We offer the following additional comments

4. Firing Range

The firing range appears to be restricted to 08:00 – 18:00hrs 7 days a week. However, this activity is likely to be distinctly audible even if not found to be

loud. We would recommend that the construction of the range is examined further for opportunities to mitigate the particular acoustics generated by this activity.

5. Engine Testing

The application includes reference engine testing at both the DTC and adjacent ABP. It is not clear whether both operations have the potential to operate simultaneously.

The ABP application makes reference to a purpose built three sided bund. It is not clear, quantitatively, as to how the bund will reduce the noise generated. If there is a proven reduction in noise emitted for this configuration could

- the facility be shared with DTC ? or,
- we would recommend that the applicant consider a new purpose built bunded area at the DTC to mitigate engine testing noise Thus reducing an existing impact of the operation.

6. SFA Accommodation

The proposed SFA accommodation located at the NW boundary of west camp has been identified noise category C according to a TAN 11 assessment (using the projected figures). The mitigation measures proposed suggest a 'reasonable' level of noise insulation but we would advise at least a 'good to best' standard to ensure maximum protection (especially should actual noise levels exceed modelled noise levels,

7. Northern Access Road

The following properties Froglands, Old Froglands, Rose Cottage and Millands farm are adjacent to the proposal. Only Millands Farm has been assigned a 1m 'acoustic' bund with a stock proof fence a-top.

We would recommend that the stock proof fence be replaced by a section of acoustic fence. We also seek additional details on highway cross sections with any proposed acoustic bunding / or fencing for the remaining affected properties.

8. Air Quality

The Biomass plant and any paint spraying facility will require Environmental Permits before they can be operated.

9. Private Water Supply

Potable private water supply, whether or not in combination with mains water supply, must be registered with Public Protection Department

10. Odour Control

The Environmental Measures stated on page submitted on page15-5 of Vol. 2 of the Environmental statement for Llantwit Major Waste Water Treatment

Works are agreed and recommended, i.e. refurbishment of the Odour Control Unit (OCU), an additional bio-filter and site specific odour management plan

11. Contaminated Land

The application documentation implies that areas already identified as being contaminated have been remediated and risk assessed. However there remains some uncertainty and in addition new sensitive receptors (e.g. residential areas) and end uses are being introduced.

Recommendation : The Environmental Measures specified on pages 10-19 & 20 of the EIA are applied Both this LPA and where appropriate the Environment Agency must be updated as to proposals and progress with regard to remediation

12. Waycock Cross

Construction & Demolition Advice

General timescales permitted for the control of construction noise are

08:00 – 18:00 Mon – Friday

08:00 – 13:00 Saturdays

None Sundays / Bank Holidays

Such restrictions apply to noisy elements of construction rather than entire operations and can vary depending upon circumstances and proximity of sensitive receptors.

Dust generated during this phase including haul routes will require control. Any mobile crushing or screening plant must be operated subject to the requirements of a Permit issued under the Environmental permitting Regulations.

Recommendations: Prior to the commencement of the demolition and construction phases a Noise & Dust Management Plan must be submitted to the local planning authority for approval.

Noise & Vibration

We are satisfied that there will be no significant adverse noise levels resulting from new road layout at this location.

Air Quality

We are satisfied that air quality issues are addressed and that no significant impacts will arise as a result of the development.

Vale of Glamorgan Council, Energy Manager. To date no representations have been received.

Head of Visible Services (Drainage). has recommended further consultation with the Environment Agency and Welsh Water on issues relating to foul

drainage, surface water drainage and land drainage around the area of the Boverton Brook, and had requested the submission of further detail prior to the commencement of works. In light of these comments and those from the Environment Agency, both of which do not raise substantive objections to the scheme or request the submission of further detail prior to the determination of these applications, it is considered appropriate and reasonable to require this detail by condition, and as part of subsequent reserved matters/full applications. Comments are reproduced at **Appendix 9**.

Head of Economic Development and Leisure (Leisure and Cultural Services)

“In general tourism terms the development is welcomed. The proposed museum will add a further attraction to Vale, although further details on what this will house, what times it will be open etc. would be useful. Obviously in Visitor terms there is an expectancy that the development will lead to a significant increase as friends and family visit those based at the site. This in turn should increase opportunities for tourism related businesses locally. The proposed hotel will also increase bed space within the rural vale although again information about the proposed operator and brand would be welcomed. The proposed leisure facilities could also have an impact on tourism as the proposed quality of provision suggests that they may attract significant military/ regional events”

Head of Visible Services (Waste Management) has provided comments in respect of the waste strategy, and has concluded overall the Strategy provides a good control and operational methodology for basic waste recycling and general details of disposal for other wastes.

8. REPRESENTATIONS

8.1 Extent of Publicity / Notifications Undertaken

2457 individual letters of notification of the application (and associated ABP application) were sent out to residents in and around the site including those in St Athan, Llanmaes, Gileston, Flemingston, Picketston, Castleton and Llantwit Major (the northern part close to the new road junction), as well as residents adjacent to the Waycock Cross roundabout in Barry.

In addition, the application has been advertised in the local press (on 21st May 2009) and on site (in excess of 25 Site Notices displayed in various locations in the locality on 14th May 2009).

The statutory notifications advise that the application(s) may be of general public interest; have been accompanied by an Environmental Statement; are a Departure from the Development Plan; and may affect Public Rights of Way, and affect the setting of listed buildings.

The Council also held two public exhibitions in St Athan (3rd June 2009) and Llantwit Major (4th June 2009), staffed by officers of the Planning and Transportation Division from 9.00 to 19.00 all-day to provide access to the full range of submitted documentation (which have also been available online via the Council's website at :

www.valeofglamorgan.gov.uk/living/planning/planning_applications.aspx .

8.2 Analysis Of Responses Received To Date

8.2.1 Petitions

To date, a total of SIX petitions have been received as follows: -

1. Residents of Llanmaes have submitted a petition of **457 signatories** objecting to the proposed Northern Access Road and the Service Families Accommodation (North of West Camp and Picketston South West). A copy of the first page of the petition is attached at **Appendix 10a**.

Note: The above petition reflects that sent directly to the Welsh Assembly Government in May 2009 (a copy of which has been provided to the Council) which has **437 signatories**. Although this has not been rigorously examined for comparative purposes, it is clear that the majority of the signatories names are on both petitions. The first page of this petition is similarly attached at Appendix 11a for completeness.

2. St Athan Community Councillor forwarded petition of **43 signatories** against the “army developing St Athan as a field training area with gun fire and explosives “(Picketston). A copy of the cover letter is attached at **Appendix 10b**.
3. A resident of Gileston has submitted a petition totalling **629 signatories**. A copy of the cover letter is attached at **Appendix 10c**. In summary the covering letter requests that a roundabout be provided at the Gileston – St Athan crossroads rather than a new traffic signal controlled junction as proposed as part of the scheme. The petitioner claims that traffic lights will encourage higher speeds and will require long term maintenance. It is also suggested that a roundabout system is easier for drivers to understand and that traffic lights will disadvantage drivers travelling from certain directions. It is also suggested that a further traffic signal controlled junction will add to journey times.
4. Residents of Millands Park, Llanmaes have submitted a petition totalling **39 signatories** . A copy of the cover letter is attached at **Appendix 10d**. (note: although it only refers to application 2009/00500/OUT, it is taken as being an objection to both schemes insofar as it relates to the Northern access Road)
5. Residents of Boverton, Llantwit Major have submitted a petition totalling **227 signatories** objecting to both applications. Although they support the development of the site previously occupied by the RAF, they specifically object to the proposed NAR and its junction, and the proposal to build SFA on the Tremains Farm. Site. A copy of the cover letter is attached at **Appendix 10e**.
6. A resident of Picketston Close, St Athan, has written a detailed letter of objection, with an attached 26-name petition. A copy of the cover letter is attached at **Appendix 10f**. In summary the covering letter expresses concerns relating to the proposal to locate gate 1 adjacent to the residential area of Eglwys Brewis; locating the firing range and field training area at

Picketston; the proposal to 'improve' the existing Eglwys Brewis Road; the removal of a significant collection of mature trees between the development and Picketston Close; locating a biomass generator near a residential area; anticipated pollution levels generated by the development; and the impact upon residents during the construction period.

8.2.2 Letters of Representation

137 individual letters of representation have been received (some being duplicates or additional representations from individuals) relating to the DTC application (although the majority of cases comment on / object to both the DTC and ABP applications).

Although these all raise objections or concerns with the development, a number are generally supportive of the DTC proposals, but object to elements of the scheme, these predominantly relating to the principle, and impacts of, the proposed Northern Access Road and the provision of Service Families Accommodation on Greenfield land surrounding the NAR. The impact of the proposed activities/ firing range etc at Picketston are also of note in the individual representations received.

In analysing the nature of such representations, a summary of the geographical areas from which responses have been received is provided below: -

• Llanmaes	31
• Millands Park	35
• Llantwit Major	12
• Boverton	14
• St Athan/ Eglwys Brewis	23
• Flemingston	5
• Picketston	4
• Elsewhere/ Unknown	20
Total	144

8.2.3 Summary of Representations

In summary, it is notable that approximately two-thirds of the individual representations come from residents in the West (Llanmaes, Millands park, Llantwit and Boverton), as a result of the NAR / SFA proposals in that area.

The nature of more 'standard' responses is provided first (making up a large proportion of the representations received) followed by a summary of the other key objections raised.

- Letters of representation received in a 'standard' format
 - **21 letters** of representations have been received from residents in and around Llanmaes (and particularly residents of Millands Park) which, while individually written, make the following points: -

"The proposed development would place a substantial highway parallel and in close proximity to Millands Park and my residence causing high levels of noise and light pollution.

The proposed development would also place a substantial highway on a Greenfield site and pasture land that has for many years been used for grazing livestock and the cultivation of arable crops. The proposed development is likely to cause damage and disruption to existing wildlife habitats and to spoil the natural environment of this very rural area"

- A second 'standard' letter submitted by **24 residents** states: -

"I wish to register my objections to aspects of the above applications.

These objections concern the Northern Access Road and the Service family accommodation.

Northern Access Road – *The proposals pass through green field land, will lead to considerable noise and light pollution and will entail considerable disruption of the lives of the people of Llanmaes and Llantwit major. In addition it will entail unnecessary expense.*

I would propose that an alternative route with a separate junction off the B4265, be located on the south side of west Camp entrance, to access both the defence technical College and the Business Park.

Service Family Accommodation *should not be built on green field land and instead be located within the Picketston site with the proposed sport and leisure facilities located in the eastern section of the existing camp site."*

- Summary of Key Objections

Following on from the above, the **key objections** raised to the development are summarised as follows: -

- Northern Access Road – in principle; and due to the noise and light pollution as a result, as well as 'unnecessary expense"
- The information submitted differs from previous public consultations
- Alternative access route to the proposed NAR, with a separate junction off the B4265, should be located on the south side of the West camp entrance, for access to both the DTC and ABP.
- The SFA should not be built on Greenfield land; should be built at Picketston instead, or on brown field land at Llandow

- SFA creates precedent for future development between Llanmaes and Eglwys Brewis
- Specific impacts of SFA in St Athan area to existing residents looking onto site
- Impact of noise on residents of northern Llantwit from NAR and new junction
- No consideration given to creation of new railway station adjacent to the site
- Disappointed to see opportunity rejected to use waste heat from Aberthaw power station instead of energy centre
- Archaeology impact
- Unnecessary loss of pill box at Picketston
- Loss of habitats and biodiversity
- Flooding – especially relating to Boverton
- Change in character of area
- Positioning of assault course and firing range in close proximity to Picketston
- noise, fuel fumes, dust and noise pollution particularly with regard to the firing range and field training sites
- impact on local roads from additional traffic, especially if used as ‘rat runs’ during construction and when facility in use.
- Ethical grounds
- Unsustainable nature of the development
- Public order and safety grounds
- Impact of construction traffic (prior to NAR) going past individual property/ies on Eglwys Brewis Road.
- The pre-application consultation process has been unsatisfactory and viable alternative plans from VoG residents not given due consideration. In particular, very little information has been supplied when asked for from the developers regarding the ABP development
- No specific historical association of REME here so no justification for its museum to be sited here – site could then be used for housing etc.

A number of letters which are considered to be representative of the submissions from local residents are provided at **Appendix 11**.

In addition, letters from the following organisations have been received: -

- Cynefin y Werin (the All-Wales network of organisations promoting international peace, social justice, human rights and equality) – St Athan campaign group has set out extensive comments in respect of the development proposals, which they consider to be contrary to the interests of the people of the Vale of Glamorgan and of Wales. A copy of the letter is attached in full at **Appendix 12**.

- Barry and Vale Friends of the Earth, objecting both to the Aerospace Business Park and to the northern road access and Weycock Cross improvements. A copy of their representations are attached at **Appendix 13**.
- Barry College expressing their support for the application, stating that “the proposed development will not only provide an important boost for the local economy but to Wales as a whole. When coupled with the Aerospace Business park the potential benefits to the Vale of Glamorgan and to Wales are immeasurable and Barry College is keen to play its part in developing the skills necessary to make these exciting projects a success”

8.2.4 Representations received from Member of Parliament and Assembly Members

Representations from concerned local residents have been received via John Smith MP and Assembly Members Jane Hutt and Chris Franks, and are included in the summary above.

In addition, the following representations have been received from the AMs, expressing their own views on the development proposals: -

Jane Hutt AM (Vale of Glamorgan Assembly Member)

Has written in to represent her constituents who have objected to aspects of this application which affect them, and also to points raised at the St Athan Partnership forum, which she chairs.

The concerns raised relate to the insufficient length and detail of the consultation process; use of Greenfield land for service family accommodation, which it is felt more could have been done to accommodate this within the footprint of the current site; increase in military personnel and impact on matters such as repair costs; proposal for a 25 foot ‘hump’ and a new northern access road, including lack of consultation on this element and need for consideration of the local ‘alternative’; lack of suitable roads and need to ensure road infrastructure in place prior to college opening; noise pollution from firing ranges.

She also advises that:

“On a more general level, local residents and members of St Athan Partnership have consistently demonstrated their support for the Defence Technical College in particular, and clearly recognise the major benefits it has to offer the local area and wider region.

The planning process itself offers an important opportunity to improve public facilities in St Athan area and the utmost must be done, therefore, to extract Section 106 funding from the applicants. It is also equally important to introduce conditions to alleviate the adverse impacts of proposals relating to noise, pollution and new developments such as the new access roads and Service Families Accommodation.

Members of the St Athan partnership recognise the efforts which have been made during the pre-application stage to accommodate their concerns and priorities and would now like these further details to be addressed”

The letter also enclosed copies of representations (previously received) from Llanmaes Community Council, St Athan Community Council and Llantwit Major Town Council.

A full copy of the letter (excluding enclosures) is attached at **Appendix 14**.

Chris Franks AM

Advises that he has been receiving and increasingly number of protests regarding the bid to build an access road, housing and field training facilities at St Athan. The letter expresses concerns as follows: -

“The Northern Access Road

The proposed Northern Access Road will have a sever impact on the countryside. It will divide the green wedge between the village of Llanmaes and RAF St Athan base in half. The alternative as proposed by the Llanmaes Community Council in their letter dated 24 July 2009 would be worthy of serious consideration

The Service Families Accommodation

There is considerable dismay that a significant amount of housing is planned outside the existing boundary of the camp. House building in the Vale of Glamorgan has been very carefully managed over the last 30 years. This has prevented the worst aspects of urban sprawl and has helped maintain the attractive countryside of the Vale. The current base covers a huge area which surely has room for accommodation.

Concerns regarding Noise from shooting and explosives

Residents are also very unhappy with the threat of a noisy firing range. There will be a huge increase in firing both in terms of the amount of shots and the calibre of weapons. This is not reasonable for this locality.

Given the volume and quality of objections to this application, I would therefore urge you to recommend refusal of these applications”

A full copy of the letter is attached at **Appendix 15**.

Andrew Davies AM (South Wales Central Assembly Member)

Has advised that he has recently met with his constituents who live at Millands Residential Park who have expressed their concerns over the effect of the proposed new Northern access Road on their locality, which include the increased risk of flooding together with effects on wildlife and the local amenity value of the area. There is also concern over the added-on developments that were not revealed in the public awareness events that were held during consultation on the original proposals, including the building of houses on Greenfield site and a rifle range.

Residents are also disappointed that there has been no detailed feedback on an alternative plan drawn up by Mr David Harris.

A full copy of the letter is attached at **Appendix 16**.

9. ANALYSIS OF LAND OWNERSHIP / NOTIFICATION RESPONSES (including responses to notice under Article 6)

The development site includes the 293 hectares of MoD St Athan, together with additional and adjoining land that has been, or is in the process of being, acquired by the Welsh Ministers.

While most of the land within the application site is in the ownership of the MoD or the Welsh Ministers, those areas within the application site that are in other ownership are intended to be acquired by the Welsh Ministers, either voluntarily by negotiation, or compulsorily using the compulsory purchase powers under the Welsh Development Agency Act 1975 and the Acquisition of Land Act 1981.

In accordance with statutory requirements, prior to submitting the planning application, the applicant has served statutory notices on all known owners and agricultural tenants (such Notice/ List having been updated since the application to cover anomalies with registered addresses and other matters). The application has also been advertised in a local newspaper.

In response to the formal Notice, the following responses from landowners have been received: -

Edmund & Crystal Romilly - Object to any consent which does not specifically make provision to ensure they retain rights of access over the developed land and any other rights necessary to ensure their ability in respect of any further development of the areas by the proposed St Athan development in which they have an interest.

In response, this is clearly a matter between the land owners and the developer and discussions relating to rights of access to individual properties are a civil matter between the parties. Any further planning applications to develop land will also be subject to consultation.

RAF St Athan Golf Club – “We have been included in discussions and been provided with a plan of the re-provisioned golf course. Our deep underlying concern is that the re-provisioned golf course is prepared constructed and fit to play before any construction of the Service Families Accommodation, together with access roads and or any other access road to the Castleton Farm Estate is permitted to begin”.

A second letter reaffirms their concerns that the golf course must be “re-provisioned, prepared, constructed and fit to play before the construction of the service families accommodation” stating that otherwise it would have a “catastrophic environmental impact on the golf club. It would mean we would close!!”

In response, this is a matter addressed elsewhere in the report and are issues that will be covered through a phasing plan.

Anthony Sinnott (owner and operator of the station Post Office at Building 509, East Camp) – “Our client has had a number of informal discussions with the promoters of the scheme, the WAG, but no agreement has been reached with regard to relocation or replacement of our client’s accommodation. At this stage, our client remains a business tenant in his existing premises. Accordingly, our client must formally object to the scheme which presumably includes the demolition of our client’s premises”

In response, this is a matter for discussion between the applicant and the land owner.

Network Rail (pocket of land to west of Boverton Brook) – “The applicant will need to reach agreement with Network Rail’s Operational Portfolio Surveyor.. as to whether this will or will not be acceptable to our Estates department... we also believe that there are legal covenants on the land that will need to be discharged by Network rail’s surveyor”.

In response, the applicants have subsequently advised in correspondence that they are satisfied that the development (Tremains Farm) can be undertaken without including network rail’s land), although such matters are effectively for resolution between the developer and land owner.

Hardy, Clement & Romilly families, and Herbert R Thomas (Land adjacent to Weycock Cross, Barry) – Asbri Planning has submitted representations stating that their clients have major concerns that the proposed works to Waycock Cross roundabout would effectively sterilise land being promoted for residential development through the Local Development Plan.

Essentially, while they acknowledge that the applications are illustrative only, and that further ongoing work will seek to refine these drawings, the junction designs are being prepared solely from an engineering point of view and as such do not take into account the need to consider development opportunities, such as those presented to the south-west of the Waycock Cross junction, which will require adequate access arrangements.

In response, while such concerns are acknowledged, these are matters that are considered to be of relevance only insofar as they refer to detailed design matters and, in particular, they relate to land ownership issues and the ability to gain access for future development which is outside of the current Unitary Development Plan, and in no way certain to be considered as a future development site in any regard. In this respect, they are considered matters which should most appropriately be considered through the Compulsory Purchase route, or through negotiation between the landowners and developers.

Persimmon Homes (interest in site known as Walters Farm adjacent to Weycock Cross, which has been submitted as a candidate site as part of the LDP process) - Object to Weycock Cross proposals, being of the opinion that the Weycock Cross proposals are unnecessary given the likely traffic generation from the DTC / ABP proposal; are unwarranted given that they do not feature in the approved Development Brief for the site and lack sufficient detail; and the potential blighting effect on their land which may be detrimental to their development aspirations. They confirm they will also be making objections to the Draft Compulsory Purchase Order

In particular, their highway consultants have advised that there is no need to provide a new 'off-line' roundabout as physical improvements could be made to the existing roundabout that would deliver a similar level of performance. They also state that the new arrangement would have environmental and commercial implications as well as being inherently unsustainable as it does not make best use of existing infrastructure. In writing it is requested that a full copy of their submission is presented to Members. In this regard a full copy of the submission is available on request.

In response, these matters are addressed in the traffic and transport section of the report.

Fairfax & Co, on behalf of Mr. P. C. Hookins (Froglands Farm, Llanmaes) – registers client's concern, possible objection, to the impact this new road scheme (the NAR) has upon land in his ownership, referring to the proximity of the road to his property, and lack of current proposals to mitigate against the noise impact on his property. Suggests a stone wall, 8ft above ground level, would be deemed an acceptable barrier so that some vestige of previously existing privacy can remain to deaden the tyre sound of vehicles using the new road.

In response, impacts of the proposed NAR and the visual impact of that proposal are matters addressed within the body of this report.

10. NATIONAL, REGIONAL AND LOCAL STRATEGIC POLICY

10.1 National Policy

The Wales Spatial Plan was originally adopted in 2004 and updated in 2008, and provides an overarching framework which is the main integration tool for the Welsh Assembly Government's One Wales document.

The Vale of Glamorgan is located within an area referred to as “the Capital Region”, wherein one of the key priorities is to “*manage the development and impact of identified Strategic Opportunity Areas within South East Wales*”. One such strategic opportunity area includes St. Athan.

National Planning Guidance is contained within Planning Policy Wales (2002) and various Technical Advice Notes (TANS). In terms of supporting the economy, paragraph 7.1.1 states that:

“The Assembly Government is committed to building a modern economy with a broader economic base that provides job opportunities for all and where greater use of modern technology redresses the problems of access and peripherality”.

The following TANS are considered to be of most relevance to the proposal:

- TAN 2 : Planning and Affordable Housing (2006)
- TAN 5 : Nature Conservation and Planning (1996)
- TAN 6 : Agricultural and Rural Development (2000)
- TAN 8 : Renewable Energy (2005)
- TAN 11 : Noise (1997)
- TAN 12 : Design (2009)
- TAN 13 : Tourism (1997)
- TAN 15 : Development and Flood Risk (2004)
- TAN 16 : Sport and Recreation (2009)
- TAN 18 : Transport (2007)
- TAN 21 : Waste (2001)
- Draft TAN 22 : Planning for Sustainable Buildings (2009)

10.2 Emerging Local Development Plan

In 2006, the Council commenced work on the preparation of a Local Development Plan (LDP) which will cover the period 2011 to 2026 and ultimately supersede the Adopted UDP. The Draft Preferred Strategy (December 2007) of the LDP sets out the Council’s strategic priorities and broad locations for development in the period 2011 to 2026 and contains the vision, objectives and key policies that the Council wishes to pursue.

The LDP Draft Preferred Strategy was approved by Cabinet in March 2009 and reflects the status of St Athan as a Strategic Opportunity Area, as identified in the Wales Spatial Plan.

“To concentrate development opportunities in Barry and the South East Zone. The St Athan area to be a key development opportunity. Other sustainable settlements to accommodate further housing and associated development.”

The Strategy identifies St. Athan as a key settlement so as to complement its future role in the Wales Spatial Plan (2008) and states that in St Athan:

“...the focus of development will be on capitalising on the significant investment and employment opportunities arising from the DTA development. New development will also reinforce its role as a key settlement both locally and regionally within the context of the Wales Spatial Plan, ensuring that future investment delivers benefits to its residents and to the Vale as a whole. The overall emphasis will be to ensure sustainable growth both within the framework of the LDP Draft Preferred Strategy and its regional context.”

A number of the LDP objectives and core strategic policies are considered to be applicable to this proposal, with the most relevant being Objective 5 and CSP 8 which relate to employment.

Objective 5 seeks to:

“foster the development of a diverse and sustainable local economy that meets the needs of the Vale of Glamorgan and that of the wider South East Wales region”.

Core strategic policy 8 supports several objectives including objective 5 and states:

“The employment needs of the Vale of Glamorgan will be met through:

- *The enhancement and improvement of existing employment sites;*
- *Suitable extensions to existing employment sites;*
- *The safeguarding of existing employment sites from non employment uses;*
and
- *Favouring farm diversification and tourism initiatives.”*

The purpose of referring to the LDP is to provide context to Members, and as this Plan is at an early stage of production it does not carry weight in the determination of this application, although the evidence which informs the production of that plan does represent a material consideration. In this regard it is clear that the adopted development plan constitutes the UDP, which is considered below.

10.3 Unitary Development Plan

The Development Plan for the area comprises the Vale of Glamorgan Adopted Unitary Development Plan 1996-2011, which was formally adopted by the Council on 18th April 2005, and within which the following policies are of relevance:

UDP Part 1 Strategic Policies

Strategic Policy 1	The Environment
Strategic Policy 2	Sustainable Development
Strategic Policy 3	Housing
Strategic Policies 4 and 5	Economic Development
Strategic Policy 6	Tourism
Strategic Policies 7 and 8	Transport
Strategic Policy 11	Sport and Recreation
Strategic Policy 13	Waste Management
Strategic Policy 14	Community and Utility Services

UDP Part 2 Environment Policies

Policy ENV 1	Development in the Countryside
Policy ENV 2	Agricultural Land
Policy ENV 4	Special Landscape Areas
Policy ENV 5	The Glamorgan Heritage Coast
Policy ENV 7	Water Resources
Policy ENV 10	Conservation of the Countryside
Policy ENV 11	Protection of Landscape Features
Policy ENV 12	Woodland Management
Policy ENV 13	International Areas of Nature Conservation Importance
Policy ENV 14	National Sites of Nature Conservation Importance
Policy ENV 15	Local Sites of Nature Conservation Significance
Policy ENV 16	Protected Species
Policy ENV 17	Protection of Built and Historic Environment
Policy ENV 18	Archaeological Field Evaluation
Policy ENV 19	Preservation of Archaeological Remains
Policy ENV 24:	Conservation and enhancement of Open Space
Policy ENV 26:	Contaminated land and unstable land
Policy ENV 27:	Design of new developments
Policy ENV 28:	Access for disabled people
Policy ENV 29:	Protection of Environmental Quality

UDP Part 2 Employment Policies

Policy EMP 2	New Business & Industrial Development
Policy EMP 3	General Industry
Policy EMP 4	Protection of land for Employment Uses
Policy EMP 5	Developments involving hazardous waste
Policy EMP 6	Developments adjacent to hazardous uses
Policy EMP 10	St Athan

UDP Part 2 Tourism Policies

Policy TOUR 1	New hotels in the countryside
Policy TOUR 5	Non residential tourist attraction

UDP Part 2 Transportation Policies

Policy TRAN1	Strategic Highways
Policy TRAN 2	Local Highways
Policy TRAN 3	Rail Development
Policy TRAN 4	Interchange at Rail Stations
Policy TRAN 7	Strategic Public Transport
Policy TRAN 9	Cycling Development
Policy TRAN 10	Parking
Policy TRAN 11	Road Freight

UDP Part 2 Housing Policies

Policy HOUS 2	Additional Residential Development
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Policy HOUS 3	Dwellings in the Countryside
Policy HOUS 8	Residential Development Criteria – Policy HOUS 2 Settlements
Policy HOUS 12	Affordable housing
Policy HOUS 13	Exception Sites for Affordable Housing in the Rural Vale

UDP Part 2 Sport and Recreation Policies

Policy REC 1	Protection of existing recreational facilities
Policy REC 2	Joint Provision and dual use of facilities
Policy REC 3	POS provision - new residential development
Policy REC 4	Provision for the Disabled and Elderly
Policy REC 6	Children’s playing facilities
Policy REC 7	Sports and leisure facilities
Policy REC 8	Golf Courses and Golf Driving Ranges
Policy REC 9	New Golf Related Developments
Policy REC 12	Public Rights of Way

UDP Part 2 Waste Management Policies

Policy WAST 1	Provision of Waste Management Facilities
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UDP Part 2 Community and Utility Services Policies

Policy COMM 5	Retention of community facilities
Policy COMM 7	Wind Generators and Farms
Policy COMM 8	Other Renewable Energy Schemes)

Policy EMP 10 in the UDP refers specifically to St. Athan and states that “further appropriate developments in respect of RAF activity within the RAF St. Athan base will be favoured provided there is no unacceptable impact on local amenity.” The supporting text to this policy recognises that the base at St. Athan provides an important source of employment for the local economy and supports appropriate expansion within the boundaries shown on the proposals map subject to environmental considerations.

10.4 Supplementary Planning Guidance

The development should also be considered against the following Supplementary Planning Guidance (SPG):

- Affordable Housing
- Amenity Standards
- Design in the Landscape
- Planning Obligations
- Public Art
- Sustainable Development- A Developer’s Guide
- Trees and Development
- Golf Related Development
- Conversion of Rural Buildings
- South Wales Parking Guidelines 1993 (as amended 2001)

10.5 St. Athan Development Brief

An adopted Development Brief outlines the proposals for the St Athan site, confirms the relationship of the Defence Technical College and the Aerospace Business Park proposals, and provides a basis for the consideration of any future planning application(s) for the St Athan site.

The Brief was prepared in partnership between Metrix, the Welsh Assembly Government and the Vale of Glamorgan Council and is designed to provide a framework for the future development of the St Athan site.

The document was prepared in accordance with the Council's protocol for development briefs and was subject to extensive public consultation, following which it was formally adopted for development control purposes by the Council in July 2006. Accordingly, it is an important material consideration in the determination of any future planning application(s) for the site.

The application site boundary corresponds largely with the development boundary shown in the Development Brief, save that the application site includes land required for highway improvements at Gileston to Old Mill and Waycock Cross (although the likely necessity for off-site highway improvements is mentioned in the text of the brief) and for replacement aeronautical ground lighting on land to the west of the B4265.

Since the Brief was adopted in July 2006, the proposal has been developed and amended, resulting in a number of changes in the development that is now proposed as part of the current planning application. The more important of these changes may be summarised as follows:

- the abandonment of proposals to serve the ABP development south of the runway from within West Camp and the introduction of a Southern Access Road from the B4265;
- the proposal to develop a new engine running facility at ABP South to replace one of the existing facilities at ABP North; and
- the abandonment of proposals to close Eglwys Brewis Road and to widen and realign minor un-named roads at the northern end of the site.
- Service Families Accommodation sites other than the golf course (with the golf course SFA site smaller than that shown in the Brief)
- Provision of Hotel

Although these changes are not reflected in the adopted version of the Development Brief, they lie largely within the defined development boundary.

The development Brief may be viewed on the Council's website at: - http://www.valeofglamorgan.gov.uk/living/planning/planning_policy/development_briefs.aspx

11. ISSUES

It is considered that the primary issues to consider as part of the assessment of this application can be categorised as follows: -

- 1. The principle of developing a Defence Technical College and associated development, taking into account national, regional and local policy, and the extent to which there is justification for any departure from the Development Plan, having regard to impacts and benefits**
- 2. The overall sustainability merits or otherwise of the proposals**
- 3. Consideration of Environmental Impacts of the development as a whole including, but not restricted to, the impact on traffic, noise, pollution, existing local communities, drainage, and the water environment**
- 4. The transport impact of the proposals including their effect on the local highway infrastructure and on highway safety in general, and including matters relating to sustainable transport.**
- 5. The potential for mitigating the effects of the development on the local and wider area through design, phasing, the use of conditions and legal agreement**

Each of these key issues is addressed throughout the report, although the general principle of developing the DTC and associated development (point 1 above) is considered first, followed by a more detailed analysis of the specific elements of the development and their impacts.

In assessing the impact of the development against these key issues, the report is then sub-divided into key topic areas (e.g. Sustainability; Environmental Impacts; Traffic & Transport; Hydrology, Geology & Hydrogeology; Historic Environment; Ecological Issues; Landscape & Visual Assessment; Agricultural Impact). Finally, the report gives consideration to overall matters of phasing and section 106 Requirements.

12. THE PRINCIPLE OF DEVELOPING A DEFENCE TECHNICAL COLLEGE

12.1 Analysis of the proposals against existing and emerging national and local policy

As indicated above, the Wales Spatial Plan (WSP) identifies St Athan as a Strategic Opportunity Area for sustainable development. The WAG's 'People, Places, futures – The Wales Spatial Plan 2008 update' refers to the fact that ongoing work on Local Development Plans must have regard to the Wales Spatial Plan.

The WSP recognises the coastal zone of South East Wales as the main economic driver of the region and that it needs to remain competitive to help raise the economic potential of the remainder of Wales

It is against this context that work has progressed on the Preferred Strategy of the Local Development Plan which seeks to concentrate development opportunities in Barry and the Southeast zone. The strategy recognises that St Athan is to be a Key development Opportunity.

National planning policy is set out in Planning Policy Wales (as amended), and Technical Advice Notes (TANs). The Welsh Assembly Government is committed to sustainable development and Planning Policy Wales sets out the Assembly's main objectives:

- Social progress which recognises the needs of everyone;
- Effective protection of the environment;
- Prudent use of natural resources;
- The maintenance of high and stable levels of economic growth and employment.

Planning Policy Wales also sets out a preference for the re-use of previously developed land, which is defined as *"that which is or was occupied by a permanent structure, excluding agricultural or forestry buildings and associated fixed surface infrastructure."* A large part of the St Athan site represents previously developed land in terms of this definition.

Planning Policy Wales also sets out the Welsh Assembly Government's commitment to building a modern economy for Wales that will have a *"broader economic base that provides job opportunities for all and where greater use of modern technology redresses the problems of access and peripherality"* The Welsh Assembly Government's economic development objectives are to:

- Enhance the economic success of both urban areas and the countryside, helping businesses to maximise their competitiveness;
- Support initiative and avoid placing unnecessary burdens on enterprise;
- Respect and encourage diversity in the local economy, for example, in rural areas encouraging farm diversification and in urban areas promoting mixed use development;
- Promote the exploitation of new technologies which can provide new opportunities; and

- Ensure that development for enterprise and employment users is in line with sustainability principles, respecting the environment in its location, scale and design.

The large majority of the land involved in the application for the Defence Technical College and associated development is located within the confines of “RAF St Athan”, an area defined by the Unitary Development Plan and covered by Policy EMP 10 wherein *“further appropriate developments in respect of RAF activity within the RAF St. Athan base will be favoured provided there is no unacceptable impact on local amenity”*.

In this regard, the supporting text to the Policy recognises that St Athan provides an important source of employment for the local economy.

The UDP defined land includes the occupied land at Picketston, together with the golf course and stadium areas to the east. It does not, however, include the areas required for the Northern Access Road and SFA in the west of the site (although these remain within the extent of the site identified in the approved development brief), or parts of the development site at Picketston.

Within this context, the development of the DTC training facility “within the wire”, and including the majority of the facilities around the Super hanger (including the Energy centre and Received, Incoming Delivery centre (RID), and developments at Picketston, are considered to be in general accordance with the UDP subject to an analysis of their impacts.

In addition, as detailed above the emerging Local Development Plan Draft Preferred Strategy identifies St Athan as one of only two ‘key settlements’ in the Vale, where *“...the focus of development will be on capitalising on the significant investment and employment opportunities arising from the DTA development”*. In this respect, the strategic direction of the emerging LDP broadly takes into account the Welsh Assembly Government’s Wales Spatial Plan. The proposals have also been adopted as a key action in the Councils Corporate Plan (R5 refers).

The key issues concerning the principle of development thus centre on the need to service the development (and associated ABP) by the new Northern Access Road, together with the provision of SFA on greenfield sites on either side of the NAR.

It is these two elements of the development that are two of the most contentious issues in the public eye, both in principle and due to their potential impacts on the area and its inhabitants. These elements also merit detailed consideration as to their acceptability based upon national, regional and local planning policies. Accordingly, these matters are addressed first.

12.2 Rationale behind location of Service Families Accommodation (SFA)

12.2.1 Numbers and Type of Accommodation Required

From an early stage in the discussions with the Council it was apparent that an integral part of the requirements for delivering the Training Academy for the MoD

is the availability and provision, not only of single living accommodation (SLA), but of accommodation for military personnel and their families, known as Service Families Accommodation (SFA). Such housing is not considered as being general purpose residential development, but effectively bespoke or “tied” housing, being planned, developed and managed for rent to service personnel who are allocated the accommodation by the MoD and who are unable to buy or rent in the open housing market. It is on this basis that discussions have progressed with the applicants both in the run up to the successful bid and the subsequent pre- and post-application discussions. Such discussions have made it clear by your officers that the housing, if approved, will need to be restricted in terms of its initial occupation and its future disposal monitored and recorded. This is deemed to be necessary so that in the event of the housing being disposed of in totality or in part, an appropriate level of affordable housing can be realised. Full details of the discussions held regarding the future requirement for affordable housing in the event of the SFA being disposed of are detailed within the section on planning obligations at the end of this report.

The SLA units will be located within the main training college site at East Camp, with the applicants’ advisors (Laing O ‘Rourke) estimating that 3238 SLA units will be required on site. Their provision is both necessary and, in terms of its location within the wire, entirely appropriate. The SLA units are akin to halls of residence within a modern day university or college campus and such an approach is very common.

The new build SFA units are proposed to be located on four sites, known as Tremains Farm, North of West Camp, Picketston South West, and the Stadium / Golf Course site. It has been indicated that the close proximity of the SFA to the military establishment is required for security reasons to enable such accommodation to be adequately protected in association with its base.

The St Athan Development Brief recognises that it would be desirable for SFA to be located close to the site, not only for security reasons but to ensure that there are significant staff on and around the establishment to act as mentors and provide an example to younger trainees. As discussions have progressed with the applicants, it has become apparent that siting SFA as close as possible to the proposed Technical College is also effective from a sustainability perspective (a matter which is addressed in further detail below).

In terms of the number of SFA required, it is noted that the St. Athan Development Brief (July 2006) anticipated a SFA requirement of 815 units, which is considerably higher than the current figure of 553 units (483 new build), albeit there was an expectation that a large number of the required units (up to 160) could be facilitated on smaller infill sites within the existing housing estates.

The applicants’ advisors (Laing O ‘Rourke) estimate that 553 SFA units will be required on site, although little analysis of such requirements was initially submitted. Clarification was thus sought from the applicants to justify this number of units, following which they have advised as follows: -

The vast majority of military personnel at the DTC will be accommodated in the Single Living Accommodation (SLA) being provided as part of Metrix's proposals within the security fence with around 3000 bed spaces being provided within the DTC itself. The SLA

is provided to accommodate single and married service personnel who do not bring their families to St Athan.

The main driver for SFA is from military staff posted to St Athan for periods up to 3 years. Additionally but to a much lesser extent military trainees on long courses (6 months+) may be entitled to a Married Quarter. The requirement for SFA is impacted by a number of variables, such as proximity of other military units (e.g. A Sailor is more likely to purchase his or her own house in or around Portsmouth or Plymouth where they could be spending most of their career), and the number of married servicemen and women who are entitled to a Married Quarter as part of their conditions of service. Some service personnel prefer to live in Single Living Accommodation (SLA) and commute weekly to their own home but these factors will vary by military unit and over time

The requirement for 553 SFA to support the DTC was derived by MoD from an analysis of historical data from existing MoD training establishments. This looked at the existing provision for SFA across these establishments and calculated how much will be required when they are co-located at St Athan. This analysis was also used to identify levels of need for different types and sizes of dwellings. The requirement for 553 SFA was reduced to take account of the expected availability of 70 existing SFA at St Athan. This left a requirement for 483 new dwellings to be constructed.

In a similar approach to that taken for other elements of the DTC, the requirements for both SLA and SFA have been developed and reviewed over time before they were confirmed. This was to ensure that they meet levels of need. The provision of SFA is costly and the MoD always seeks to minimise the risk of overprovision. This can at times lead to a shortage of SFA in a particular area and, when this occurs, substitute SFA (i.e. renting suitable accommodation on the open market) is sought to overcome short term peaks in the requirement.

While these submissions indicate that the exact calculation of the requirement for SFA is, perhaps, an inexact science, nevertheless the calculations appear to be based on sound analysis of MOD trends such that there is not considered to be an objection to their submissions, which in any event are substantially below the original estimate in the development brief. Moreover, the initial occupation of such dwellings would be controlled through the Section 106 legal agreement, as would the requirement for a proportion of any units no longer required for SFA in the future to be released as affordable housing, although this is not a matter that to date has been fully accepted by the applicant (as detailed within the planning obligations section of this report).

12.2.2 Analysis

As detailed above, the sites proposed for SFA (with the exception of the stadium/golf course site) do not fall within the area designated by Policy EMP 10 and, accordingly, are classed as being within the countryside. The golf course site is shown in the development brief and, being within the EMP 10 boundary, and having an association with the former RAF housing to the west, is considered to be an appropriate location for such new development to serve the DTC, being a large-scale rounding off development in a sustainable location. In addition, its use for housing has been generally accepted in representations made, objections being largely focussed on the other three sites which lie outside Policy EMP 10 and were not suggested initially as housing sites within the Development Brief.

Whilst the construction of new residential units in the countryside is contrary to the Vale of Glamorgan Adopted Unitary Development Plan 1996-2011 (Policies ENV1

and HOUS 3 refer), the development brief recognises the need for such “tied” accommodation to be provided on or close to the site. The brief proposed a sequential approach to the provision of the SFA should accommodation need to be provided in any different format other than a protected housing estate close to the base. Although the MOD has undertaken a search sequence in identifying sites for housing development, the MOD’s strong preference is that the SFA should be located at St. Athan, close to the DTC and take the form of larger agglomerations of SFA to ensure that they can be effectively policed in times of heightened security. In addition, the co-location of employment and housing is preferable in the interests of sustainability, and this is a position that has been supported by your officers on a without prejudice basis during pre-application discussions. Indeed, the location of such ‘bespoke or tied housing’ so close to a place of work/ training provides an excellent if not unique opportunity to promote sustainable development in terms of location, siting and travel to work patterns.

In considering alternatives close to the site, the applicants’ sequential approach considered the following four sites but disregarded them for the following reasons:

- West Camp North- Considered likely to be unacceptable for environmental reasons.
- West Camp South- Considered unacceptable due to aeronautical constraints associated with the operation of the runway.
- Land South of Picketston South- Problematic access, concerns over impact on the setting of the Listed church, and limited capacity.
- Annington Homes Infill Sites - Economically unviable and would result in the loss of amenity land for existing residents.

The first two of these sites have previously been put forward as ‘candidate sites’ for inclusion within the emerging Local Development Plan for residential development, although they have recently been officially withdrawn from consideration. Irrespective of their withdrawal, however, these two sites are relatively large and in MOD ownership, with Land South of West Camp being 6.885 hectares in area, and West Camp North 11.81 hectares, such that analysis of their potential to provide SFA has been considered.

In this respect, it is notable that both sites have been discounted in the “Statement on Site Selection for the Service Families’ Accommodation for the Defence Technical College at St Athan”. The former of these has been discounted on grounds relating to the fact that housing would infringe the runway transitional surface – one of the obstacle limitation surfaces identified in aerodrome regulations - which is accepted as a constraint to such development.

The latter site, however, was discounted as “unlikely to be acceptable for housing on environmental grounds”, referring only to “neighbouring uses”. Given that this site has (previously) been put forward by MOD as a candidate site for residential development, and is acknowledged by the submissions as being capable of accommodating approximately 125 SFA units, further submissions in respect of why this site has been discounted were requested.

In response, the applicants have since confirmed that MOD determined (in 2008) that the whole of West Camp was to be retained for operational purposes, including a secure boundary fence for an enclaved West Camp, such land

including most of the proposed candidate site. In addition, WAG has confirmed that they expressed concerns that housing on such a site could be incompatible with the redevelopment of the ABP.

While these submissions have not expressly stated what the 'environmental grounds' for excluding these sites were, it is nevertheless accepted that the site's proximity to the ABP site (existing and proposed), raises potentially significant concerns in respect of noise nuisance and adversely affecting the operation of the ABP commercially. In addition, the additional representations on MOD grounds are acknowledged and accepted as justification for such site being discounted, such that there are no other suitable sites in the vicinity to cater for the large demand for new accommodation for service families.

Notwithstanding the MoD's preference for siting the SFA near to the DTC and the inherent sustainability advantages of such an approach, the applicants have also undertaken an analysis of large housing sites (50 units or more) within a ten mile radius of the site. This included 23 sites already benefiting from planning permission and 5 sites with a residential allocation under the UDP, however, the journey time to site from these was considered impractical. It also included LDP candidate sites, however, these have been disregarded as too speculative and with uncertain timescales, given the early stages of the production of the LDP.

In light of the above, the submissions have concluded that the four proposed sites best meet the above requirements.

In this regard it is acknowledged that SFA is required to service the DTC. The manner of delivering the housing as close as practically possible to the site has been assessed and 3 of the 4 sites (Tremains Farm, Land North of West Camp, and Picketston South West) are located adjacent or adjoining either the proposed Northern Access Road and the existing base at St Athan. Whilst it is accepted that the sites in question are located in the countryside and the development of the sites for housing is contrary to the UDP Policy HOUS 3 (Dwellings in the countryside), as well as Policy ENV 1 (Development in the countryside), the bespoke or specific nature of the housing is material as is the advantages in sustainability terms (especially in terms of travel to work) of locating housing in close proximity to the College. In this particular case the housing will also relate closely to, and be accessed via, the new Northern Access Road. The proposals will allow for the provision of pedestrian and cycling links between all sites and the DTC and other planned and existing facilities. It is anticipated that the Travel Plan will also deal with issues relating to the control of car use, controls that will be meaningful and capable of implementation due to the location of the SFA in close proximity to the DTC.

Representations, including those from Llanmaes CC, have expressed the view that there are more appropriate locations including the Picketston site (proposed primarily for leisure purposes but suggested as a 'swap' with the proposed SFA sites) and land at Llandow.

Such matters have been addressed by the applicants, who advise that the DTC is designed to create the most effective training provision and that it is a key requirement to have sports pitches and external training areas integrally related as far as possible to ensure that the most efficient course scheduling and training

days can be provided. Close proximity of all the training elements is therefore essential since this promotes sustainability and facilitates the security of military trainees, benefits which more remote locations from the DTC core do not achieve. Moreover, they add that the sports facilities are located where there is the best balance between training needs and access to the public without need for extensive physical or operational security controls.

With respect to Llandow they also state that this “is a speculative proposal for private sector housing and is not so well related to St Athan and the DTC as the current planning application proposals”.

In assessing such matters, the views expressed above in respect of the co-location of sports and training facilities is accepted, and is considered to be a rational and well thought-out approach to the masterplanning for the DTC as a whole, such that the benefits of ‘swapping’ for housing would not represent an appropriate response, or indeed one which would be accepted by the applicants in any regard.

12.2.3 Conclusions

Having considered the submissions in respect of the location of the SFA, the requirement to ensure that all such new development represents the most sustainable option in terms of the relationship to the proposed use is of high importance. The difficult balance between encouraging sustainable patterns of movement and living (such as demonstrated in the overall sustainability aspirations of the development) and needing to develop greenfield sites to achieve this is acknowledged. Nevertheless the lack of available sites sufficiently close to the proposed DTC that are allocated in the UDP, located within settlement boundaries or benefiting from planning permission is noted. Likewise the inherent difficulties with a number of sites adjacent to West Camp due to their environmental compatibility with existing/proposed uses is also noted and accepted. It is thus concluded that siting SFA within selected greenfield locations is acceptable in principle, subject to an analysis of their respective direct impacts, these being matters addressed in detail later within this report.

In accepting the principle of such development on green field land, however, it is considered essential that the Section 106 agreement ties the construction and use of the SFA to military personnel and their dependents on first occupation. Likewise it is also essential, in your officers view, that an appropriate proportion of that housing is subsequently retained and utilised as affordable housing should the sites or part of them become surplus to requirements in the future. Such matters are addressed in the section on legal agreements elsewhere within the report.

In closing, it should be noted that a number of objections contend that the SFA should not be provided on a Greenfield site and instead developed elsewhere. There is also concern at the precedent of granting permission for the SFA. These are matters that have been addressed above and given the specific nature of the proposals, being linked to the DTC, it is not considered that the granting of permission will establish a precedent. This is particularly the case given that future development options will be assessed through the emerging LDP.

12.3 The Principle of the NAR and a consideration of other Highway Access Options

Members will note that a key objection to the application relates to the principle of developing a new Northern Access Road (NAR), referring to the impacts of that road and associated junctions on the amenity of residents and the wider environment. These are also matters that have been the subject of petitions submitted to the Council. The principle of the NAR and possible alternatives are addressed below, and the impacts of the road in terms of issues relating to residential amenity and other interests of acknowledged importance are addressed in the various relevant sections of this report.

Existing access to MoD St Athan is via two principal gates: West Gate, which is accessed from the B4265, near Boverton; and East Gate, which is accessed from St Athan Road, north of St Athan village. It is accepted that neither of these existing accesses is suitable to serve the substantial new development now proposed at the site, due to security and highway safety/ capacity grounds respectively.

Given the levels of additional traffic that would be generated by the development proposals, both private and commercial, it is therefore also accepted that there is a requirement for a new access with a good quality link to the existing highway network, with Council Officers having been involved in detailed discussions over such matters.

Within this context, the access proposals include a new NAR to serve both DTC and ABP North – providing separate entrances to each – and a new Southern Access Road to serve ABP South only. The NAR also provides access to three of the four SFA areas.

The applicants' decision to incorporate a new Northern Access Road (NAR) to serve the development (and associated ABP proposal) represents a departure from the Unitary Development Plan. It has also, in the view of your officers been one of the most contentious of the development proposals, with significant levels of objections (including petitions) received from residents at Millands Park, from Llanmaes, and Boverton.

The proposal to provide a new main access into the site via a new road for the B4265 was referred to in the St Athan Development Brief. This recognised the advantage of such an approach in that the traffic would benefit from a direct and separate access onto the main B4265. It is envisaged, and was envisaged at the time of writing the Development Brief, that the Aerospace Business Park (north) would also benefit from the same access road.

At the time of writing and consulting on the Brief, it was however envisaged that the existing public highway (Eglwys Brewis Road) would need to be closed and diverted as a public highway to create that new road. However, as advised elsewhere, this is no longer the case.

Given that the provision of such a new access undoubtedly has an impact upon nearby properties and on the general rural character of the locality, the analysis of the options considered by the applicants is therefore of paramount importance in

seeking to justify such extensive new development, which itself also has implications for the proposed Service Families Accommodation which are enclosed by, or straddle, the NAR.

In this respect, the submitted Planning Statement (at Appendix C of that document) has provided details of the applicants' consideration of the alternative highway options open to serve the development, these options being subdivided as follows: -

- Access from the North Northern Access Road
Eglwys Brewis Road
- Access from the South Tunnel under the runway
Tunnel under the western end of the runway
Southern access east of the runway
- Access from the East St Athan eastern bypass
St Athan inner bypass
- Access from the West Access through West Camp.

While all these options were considered by the Welsh Assembly Government (or the WDA) between 2003 and 2009, consideration of the latter option through West Camp was only made after such proposal was raised during public consultation. The above options were discounted on the following (summarised) grounds: -

- Access from the North - The upgrading of Eglwys Brewis Road was considered unacceptable, principally on environmental and construction phasing grounds;
- Access from the South – each option involved a new bridge over the railway, with two requiring a tunnel under the runway. Tunnel options have been dismissed on grounds including: construction, maintenance and operational issues; affordability; and security and public safety (tunnel under an operational runway), together with phasing difficulties.
- Access from the East - Both options would have significant environmental impacts, while neither option provides access to ABP South or access to SFA sites.

Consideration of each access option has been guided by four basic principles, these being the necessity to maintain the national and local security of West Camp for the MoD; a requirement to deliver an enhanced ABP to accommodate the Welsh Assembly Government's proposals; necessity to avoid extraneous traffic passing through St Athan village; and airfield airside access, runway operation and runway safety. These four basic principles, according to the applicants, have been supplemented by other considerations, including those related to environmental, engineering and safety.

Within this context, the Council accept that the above options would not represent acceptable or appropriate access arrangements for the combined DTC/ ABP developments.

The potential for access to be achieved from the west requires further examination, not least because a local resident, in conjunction with Llanmaes Community Council, has submitted an alternative access proposal through West Camp which they consider negates the need for the NAR.

The applicants' initial submissions have noted that public consultation suggested that a new access be constructed from the B4265 from the west through West Camp, instead of the currently proposed Northern Access Road. They submit that an access through West Camp is technically feasible (as has been suggested by the residents 'alternative' plan), but is unacceptable for a number of reasons, these including: -

- That it would “prejudice national and local security, and the efficiency, viability and operation of the existing West Camp through adverse impacts, including: loss of buildings, reduction in buildable footprint and additional security requirements to accord with national counter terrorism measures”.
- The Welsh Assembly Government would not support the loss of developable land within the ABP which would adversely affect the economic viability and efficiency of its proposals.
- Introduction of new through traffic into the ABP would allow public access into secure zones, create security and health and safety issues (that is, access to airfield airside and FOD (Foreign Object Damage) hazards).
- The Welsh Assembly Government would also not support activities that would infringe the safeguarding of the airfield.
- An access through West Camp would introduce unmanageable phasing difficulties for the DTC and ABP as there would be a need to construct a new railway crossing to enable the main site construction activities to commence. Any new crossing would require the formal approval of Network Rail and would result in considerable delay to the project through negotiation and construction of the new bridge.
- A West Camp access would also require separate improvements to existing road infrastructure to serve proposed SFA sites.

Although these submissions covered the principle of such access, the applicant was requested to provide comments on the suggested alternative, should they differ from those previously expressed in considering such potential access arrangements. In response, the applicants have advised as follows: -

The Community Council and Mr Harris propose an alternative access off the B4265, south of the existing West Camp access. Consideration has been given to the effects that such an arrangement would have on the proposals and, for the reasons set out in Appendix C to the DTC Planning Statement, Paragraphs 424 - 428 of the ABP Planning Statement and Section 2.2.3 of the Environmental Statement, which include national and local security, loss of buildable footprint, viability, efficiency, loss of buildings, additional security and timing, it would not be appropriate to provide a public access road to the DTC and ABP through West Camp.

Notwithstanding the above, there are two fundamental issues that negate such a proposal. Firstly, it has already been confirmed that West Camp (which includes the area known as Llantwit Road) is and will remain for the foreseeable future in active military use. It is a secure, protected environment. Secondly, in conjunction with the above, the requirements for operational airfield regulations sterilise large areas of land adjacent to the runway from any form of infrastructure and or development. The combination of these two issues alone therefore renders any form of access at this location unacceptable.

At this stage, it is to be noted that the approved Development Brief considers the access proposals, and refers to the need for the construction of a “new Northern Access Road, to run from a new junction on the B4265 and to serve as the principal access to both the DTC and the northern part of ABP”, such new road being characterised as a new “direct and separate access onto the main road that bypasses both Llantwit Major and St Athan”. In addition, the Brief (including the aerial photomontage on the front cover) shows a meandering route within the land to the west where the NAR is now proposed. The proposed NAR is therefore considered to broadly reflect the approved development brief, albeit it’s precise route and physical impact is now open to scrutiny (and will be assessed within the report).

While the alternative proposed by the local resident and Community Council represents substantive new information post-development brief that requires consideration as part of the overall analysis, nevertheless it is accepted that such an option does not represent a feasible solution for accessing the development proposals.

12.4 The Economic Case for the Development

The promotion of the site at St Athan for a Defence Technical College and Aerospace Business park has resulted from the opportunity that exists to build upon the skilled workforce that already exists in the area. The defence Training Review has led to an approach of rationalising elements of Ministry of Defence training to a single modern site, and the successful bid to the defence training Review Rationalisation programme was developed and progressed alongside WAGs own proposals for an Aerospace Business Park, to attract new companies and jobs to St Athan. WAG sees this as complementing existing opportunities at Talbot Green, Nantgarw and Cardiff Airport.

As part of the application, the applicant has submitted an ‘Economic Impact Assessment’ drawn up following the undertaking of a study to provide information into the potential economic effects of the proposed Defence Technical College and an Aerospace Business Park. The study has quantified the economic effects of the development proposal and where this has not been possible a qualitative assessment has been provided.

The Economic Impact Assessment identifies that all the economic impacts identified are positive and are considered to be nationally important and will lead to long term benefits. The underlying study also highlights that a significant portion of these effects may be felt at the local level and that this is likely to be especially important in the context of the current financial crisis.

Key findings include an estimate of 5,065 to 6,190 jobs (total net additional employment and includes trainees) as a result of operational activities within the local travel to work area and would represent 2 to 3 per cent of its economically active population (estimated to be 230,500 in 2007). In addition, gross value added within Wales as a result of operational activities is estimated to be £433m to £530m this being significant compared with Welsh gross value added of £44.3 billion in 2007.

In terms of construction employment, the Economic Impact Assessment identifies that the direct employment opportunities created during the construction period will cause indirect or multiplier effects as a result of increased spending in the local area and this will in turn generate further job opportunities. The construction programme for DTC is estimated to stand at £830.5 million over the 4 year construction programme.

Wider economic effects identified and described qualitatively in the study include:

- Positive effect of training on the UK defence capability;
- Greater efficiency savings to MoD as a result of modern rationalised facility;
- Benefit of improved training on Service personnel and positive impact on wider well-being;
- Positive impact on competitiveness of aerospace cluster in South Wales;
- Training Benefits arising from ABP; and
- Positive effects between the development of DTC and ABP.

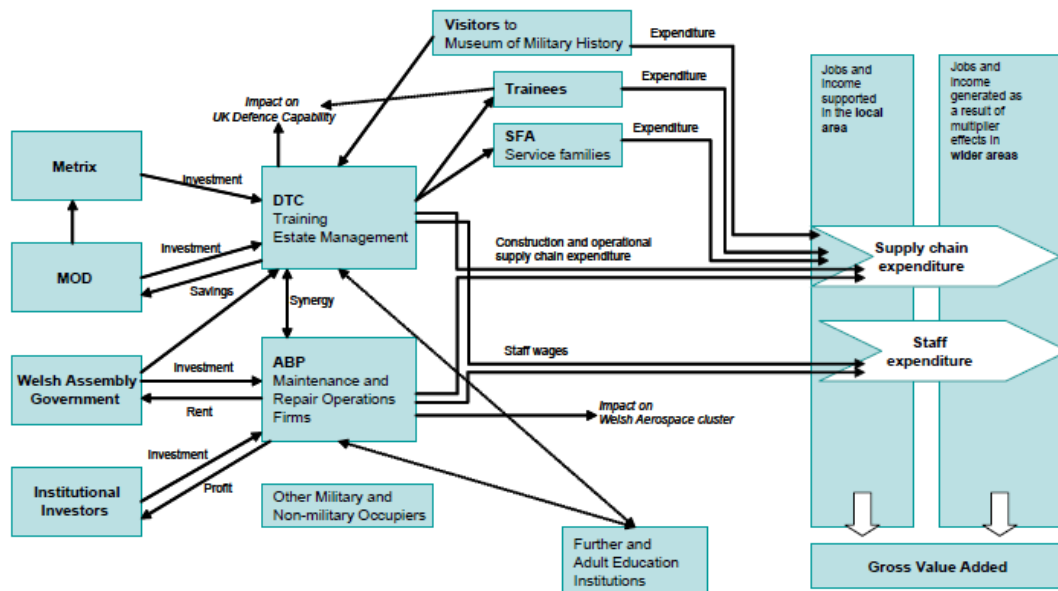
The Economic Impact Assessment concludes that the creation of job opportunities does not necessarily imply that the local population will take advantage of them as contracts tendered for the work will be competitive and there is a possibility that some non-local contractors could be more competitive. Metrix have, however, indicated that an appropriate level of commitment will be made in this respect through establishment of an on-site jobshop as well as use of local Vale jobcentre plus to advertise and recruit construction workers including mobile facilities to tour the local communities to ensure that potential employees are aware of the forthcoming opportunities. It is understood that initiatives will be further developed through the introduction of a labour recruitment strategy.

There is already significant interest among local businesses in South East Wales regarding the business opportunities from the proposed development. The Welsh Assembly Government has undertaken awareness raising initiatives among both the public and private sectors. This has included local service providers, manufacturers and professional bodies. It is estimated that DTC operations would require an annual operating expenditure of £60million for all assets and consumables.

In terms of employment at the DTC, the statistics provided indicate that the DTC site is expected to provide 2,980 direct on-site jobs when DTC becomes operational in 2014. It is understood that at this time 2,750 trainees will also occupy the site. It is worth noting that students may well be considered as full-time

employees as they do receive a wage whilst they train and relocate when their training is complete

The diagram below has been taken from the applicants Economic Impact Assessment to highlight the likely economic flows associated with the proposal.



Source: Entec UK Ltd
Figure 2: Potential Economic Flows associated with the proposal

The figure presents a simple conceptual framework (model) of the economic ‘flows’ produced by the proposal on the local/regional economy. These arise from:

- Direct impacts of DTC and ABP spending;
- Indirect impacts of DTC and ABP spending; and
- Induced impacts through spending by DTC and ABP employees, etc.

In addition, further expenditure is expected as visitors that attend the site over and above direct employees. These may include, for example:

- Business tourism to ABP and DTC business activities;
- Visitors to Museum of Military History (The Museum of Military History is estimated to attract between 5,000 and 10,000 visitor per annum based on the number of visitors, the estimated daily expenditure and multiplier effects, the total estimated spend associated with visitors to the museum is calculated at between £270k to £540k per annum) ; and
- Families and friends to military personnel (e.g. for passing out parades) also spending money in the local area

It is clear that the economic benefits are significant, and this has to be carefully considered when assessing the merits of the proposal, and in this respect it is also notable that the Council’s Economic Development Unit has expressed the view that the opportunities that the DTC could bring to the Vale of Glamorgan are significant and diverse, that it is the largest inward investment seen in the Vale, and has the ability to impact upon a variety of aspects of life in the Vale of

Glamorgan. It also has the possibility to create significant numbers of jobs which hopefully will benefit the local workforce. In this regard the Head of Economic Development and Leisure has commented that the opportunities arising from the development are potentially significant in stimulating the local economy. Conditions are suggested to cover matters such as the commitment to the establishment of a job shop / local labour recruitment strategy.

12.5 Summary

In summing up, when assessing the principle of development, the following is of particular significance: -

- Reference to St Athan as a Strategic Opportunity Area within the Wales Spatial Plan
- The policy context provided by the Unitary Development Plan, specifically Policy EMP 10 which encourages further appropriate developments in respect of the RAF activity within the RAF St Athan base.
- The St Athan Development Brief sets a further context for considering and assessing the submissions, which Brief refers explicitly to the new access arrangements and approach to Service Family Accommodation (SFA)
- The sustainability credentials of a mixed use scheme, delivering sustainability in terms of location of development, linking housing, education and employment. The positive benefits of co-locating housing, employment, training and associated facilities, in this instance outweighs the loss of greenfield land to accommodate aspects of the development.
- The submission demonstrates that other options in respect of access and the provision of SFA have been assessed and provides justification as to why those other options have been discounted.
- The economic benefits of the scheme and associated job creation opportunities arising as a consequence of both the DTC and ABP proposals also carry weight in assessing the principle of the development.

Against this assessment in respect of the overall principle of the development in strategic terms, it is then necessary to break down the development into topic areas in order to assess further issues of impact and potential harm of each element of the proposal and whether any such impacts can be adequately managed, controlled or mitigated.

Given the magnitude of the development proposal it is necessary to adequately consider, even at outline stage, the principle and likely impacts of the individual elements which make up the scheme as a whole. The following section seeks to identify the key parts of the development and assess them on a site-specific basis to identify any key issues arising from the proposals.

For ease of reference, these are broken down into those 'inside the wire' and those 'outside of the wire', with appropriate extracts from the submitted masterplans provided for assistance.

13. SITE / DEVELOPMENT - SPECIFIC ISSUES : “INSIDE THE WIRE”

This section of the report seeks to identify the primary elements of the buildings and activities that would be undertaken “within the wire” (including entrance points). It is emphasised that the application relating to all of these elements are in outline only, with all matters reserved for subsequent detailed approval.

Nevertheless, the submissions for the outline application include a comprehensive Design and Access Statement (DAS) plus Masterplan drawings, which comprehensively identify the nature of the proposals, the buildings proposed, and the design parameters and landscape characteristics of the development, such that an analysis of their overall impact can be made at this stage in advance of the detailed submissions.

The main building elements of the DTC will be concentrated on the existing site known as East Camp, involving its redevelopment in the form of new buildings and associated internal access routes, parking areas and landscaping.



Figure 4: East Camp Masterplan

13.1 Main Gate

Located at the northern boundary of the site, at the location of the Grade II Listed Church of St Brise, the main gate will be the primary entrance used by trainees, military staff and visitors. The need for this gate to have a sense of arrival appropriate to its national and local significance has been at the forefront of masterplanning, and in this respect it is considered that the proposed main gate arrival area, accessed from the improved Eglwys Brewis Road, creates an entrance of status, which will also emphasise its military tradition and status.

Based around a road gyratory (the physical impact of which on the entrance and setting of the listed Church is of key importance), the key buildings in this area are referred to below: -

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 Drawing No: SA-C0XXX-TP-900-SB-X-4000
 Drawing Date: 11/08/2020
 Drawing Scale: As Shown

Key

- Applicable Boundary
- Existing Buildings
- New Buildings
- New Service Facilities/ Accommodation
- Sports Field
- All Weather Courts
- Paved / Hardstanding
- Planting / Landscaping
- Existing trees & significant vegetation blocks
- New trees & landscape planting
- Landscaped area
- Proposed Accessible Surface/Park



P08	Issue for Planning	TC	11/08/20	JR
P07	Issue for Planning	TC	03/08/20	JR
P06	Issue for Planning	TC	02/08/20	JR
P05	Masterplan 2/17	CA	02/08/20	JR
P04	Masterplan 1/17	CA	02/08/20	JR
P03	Proposed Accessible Surface	TC	18/06/20	JR
P02	Proposed Accessible Surface	TC	11/06/20	JR
P01	First Issue for comment	TC	02/06/20	JR
	Issue	Drawn	Date	Checked



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 Engineers

DTC St Athan
 Illustrative Masterplan
 Key Plan

Scale: 1:7500 @ A1, 1:15 000 @ A3
 Date: 11/08/2020
 SA-C0XXX-TP-900-SB-X-4000
 FOR PLANNING

Figure 3: DTC Masterplan

The principal elements of the development 'within the wire' are discussed in greater detail below: -

- A 'Museum of Military Heritage', sited to the east of the main gate (6900 sq.m.)

It is intended for this to be a museum of national importance, with an imposing scale and design (up to 15 metres in height). Although it would principally 'front' onto the main gate, most likely with prominent displays of service memorabilia and equipment, the museum would have its own car park for public access separate from the Main Gate area, and would be set within its own landscape environment.

Not only is it considered appropriate in design terms for a grand statement to be made for such a building at the main gate, but the principle of accommodating a museum of national importance as part of the development is welcomed in general tourism and economic development terms, adding a further attraction to the Vale of Glamorgan's cultural assets. This would be in addition to the undoubted tourism benefits from increased visitors to the area as a whole as friends and family visit those based at the site.

- The 'Faith Buildings'

A new 'Church / World Faith Centre' and 'Ghurkha Temple' are proposed to the immediate west of the former Church of St Brise, providing facilities for the both military forces and local community. Located outside the main perimeter fence, these buildings would serve as a religious centre for the DTC, but are also intended for use by civilian visitors and the wider community. A Church Hall would also potentially be used by the wider community.

Although a reserved matter, the DAS demonstrates close attention to detail insofar as the external design of the Church and World Faith are contemporary and well-designed buildings which reflects the overall design concept for the site entrance, and yet do not detract from or unduly compete against the historic Grade II Listed St Brise Church.

- Grade II Listed Church of St Brise

As referred to above, the Medieval Church will become a central component of the main gate entrance setting – see section on Historic Environment.

- Pass Office and Gate House/ Guard House

Located at the gate and southern edge of the entrance, these buildings would complete the set of buildings, and would share a common architectural language that forms visual unity with the entrance buildings above.

13.2 The College

In conclusion, the detailed design of the buildings will be assessed at reserved matters stage, but the submitted DAS, which also identifies the strategy for its landscape design, which seeks to respond to the adjacent architectural forms through both soft and hard landscape materials and also take into account the security and vehicle circulation issues involved within this complex area, will provide the grand entrance and setting for arrival at DTC, whilst ensuring that the security requirements of such an entrance do not unacceptably detract from its significance. The general approach to this area is considered acceptable and is to be welcomed, given that matters relating to detailed design and layout are matters that remain under the control of the Council as local planning authority through future applications.

13.3 The Mall & Parade Ground

'The Mall' is a long formal space with tree lined access routes and pedestrian paths running north from the main gate south towards the parade ground and offices. This is a key space with all DTC personnel moving through this space on a daily basis, and has been designed as a key visual and pedestrian route, with key frontages formed by 'the hub' and the teaching blocks on either side.

The Parade ground is at the head of The Mall, and provides the principle ceremonial and parade space for DTC St Athan.

The provision of training is the core function of the DTC St Athan, and the technical training solution will predominantly be provided within and around the existing 'Super Hangar' (approx. 54,400 sq.m), which will be subdivided for training purposes and partially converted for smaller workshops and instruction spaces. Training and classroom space equates to just over 36,000 sq.m. of floorspace.

New buildings including a Training Office, Teaching Blocks & Learning Resource Centre would be added to complete the spaces required for the college. These buildings are shown in the Masterplan primarily in a north-south axis adjacent and connected to the east side of the existing Super Hangar. These new buildings screen the industrial character of the hangar and make a formal frontage to the Mall, which is considered to be entirely appropriate visual and logical design solution.

13.4 The Hub

Located centrally along The Mall and at the end of the Heritage Park are two collections of buildings (hub north and south), providing the facilities and services required by the users of the site. These buildings are designed to interact at a key junction with the heritage park, having a 'civic' scale, will share a common architectural language, and create a sense of place akin to a village centre, including a significant central open space.

These buildings include canteen facilities, sports provision based around a four court sports hall, a gym, supermarket, internet café, games area bar, hairdresser and offices. Additional support facilities which function as part of this community of buildings are the adjacent medical and Dental facility and the Learning Resource Centre. Members should note that these are 'secure' facilities being located within the wire. Their location at the eastern edge of the training college and forming a gateway to the Heritage Park (described below) and single living accommodation is considered entirely appropriate in creating a transition from training to living on a west to east axis.

13.5 Heritage Park

All the pedestrian routes spring from the dining and recreation hub and link to all the Single Living Accommodation through a Heritage Park. Traffic free routes connect reminders of service, training, history and values. The messes close the vista and head the Heritage Park to the east.

The Park will function as the main arterial movement corridor of the site (traffic free), forming the informal axis of the site and connecting the living and accommodation areas. The park will generally respond to the naturally gently sloping landform across the site and provide a link between the surrounding buildings.

The grand scale of the heritage park is welcomed as the key 'green artery' which integrates all of the buildings within the site and provides a strong identity to the development, and serves as a permanent landmark feature, as well as a valuable source of recreation to the users of the site.

Sited within the park are the Military House Offices, which are an arrival point for all new trainees, as well as a source of information and resource.

13.6 Single Living Accommodation (SLA)

One of the major elements of new building footprint proposed (at approx. 125,000 sq.m) relates to the need for 'Single Living Accommodation'. These are proposed in blocks to either side of the Heritage Park, which have been loosely configured into informal arrangements of rows and crescents, each linked to the Heritage Park by paths and landscape. A series of corner block accommodation units would also act as markers in the landscape.

Subject to their detailed designs, being agreed at reserved matters stage, the arrangements shown within the Masterplan are considered to be of a high quality which has taken due account of the importance of such accommodation as the living heart of the DTC.

13.7 Messes and Officer Accommodation

At the head of the Heritage Park (on the east side of the site, closest to St Athan), is the proposed Messes and officer accommodation. The Mess building is a key building whose scale and form (scale parameters identify this to be up to 18 metres in height) will clearly result in a building of substance and prominence in the wider locality, including from outside the wire.

While the siting and scale of this building is acknowledged and is clearly a key strategic building within the context of the DTC proposals, nevertheless there is a need to ensure that the design of this building takes appropriate regard to the manner by which it is viewed externally, rather than the principal consideration to date clearly having been how it befits its importance when approached from the Heritage Park. This can be controlled through the subsequent reserved matters application. The general approach is however welcomed.

13.8 Second Gate (and environs)

The 'Second gate' is situated to the south of Eglwys Brewis Road, north of the existing Super Hangar, and will provide access for service vehicles, deliveries and military vehicles and trainers. Essentially, the super hangar forms a logical divide between the 'noisy/dirty' aircraft, noise and workshops in the west, and the 'quiet' parts of the site to the east, hence the need for this separate access. It also provides access to the proposed Energy Centre and Received incoming Delivery (RiD) facilities.

Whilst these facilities and buildings are actually situated outside the DTC secured perimeter (but adjacent to it), they are considered here given their siting and relationship to other buildings.

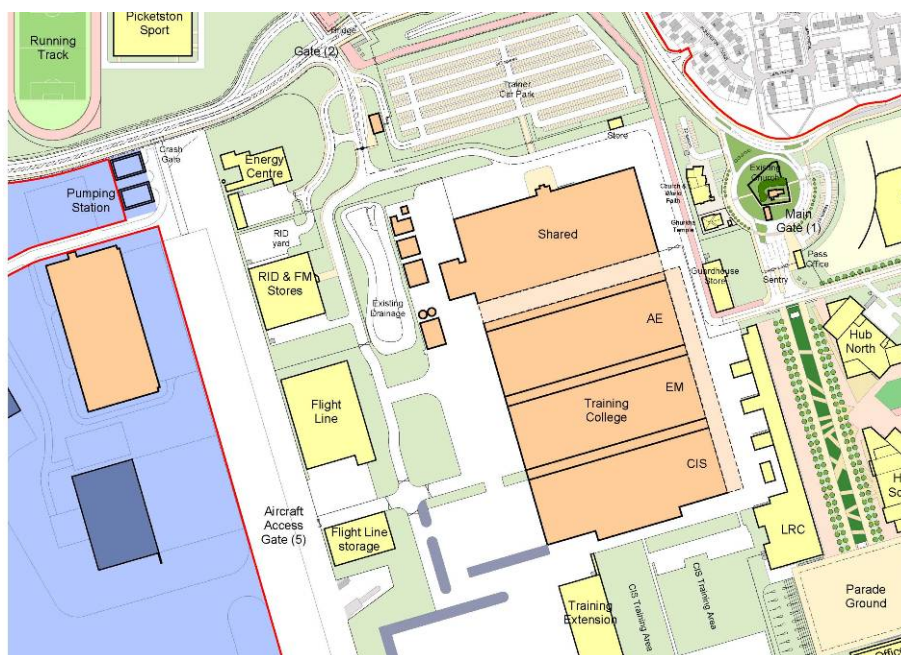


Figure 5: Second Gate

13.9 RiD (Received Incoming Delivery (RiD) facilities)

A key service building for the entire development, all deliveries will come via the RiD building, proposed to be a maximum height of between 12 and 15m. Its location adjacent to gate 2 and to the west of the proposed college building is considered appropriate in master planning and traffic management terms.

13.10 Energy Centre

As emphasised in the wider strategic overview of the sustainability of the scheme contained within the report, low environmental impact has been at the heart of the design of the DTC development. Part of this strategy involves the choice of a Biomass CHP Energy Centre to generate combined heat and power (CHP) to serve the DTC development, with the use of such technology positively encouraged in order to maximise the sustainability of the scheme.

The proposed central energy centre would be located to the south of the Northern Access Road, opposite the Super hangar on a 0.69 hectare site, and would have in the region of 1600 sq.m. in floorspace, be constructed to a maximum height of 24 metres, and have a 30 metre high stack. The site has been chosen taking into account the need for biomass fuel delivery trucks arriving and departing via the West of the DTC site (i.e. avoiding traffic via St Athan); flue dispersal over open acres of land where South Westerly winds prevail; close proximity to the existing main gas supply pipeline; and adjacency to the proposed new swimming pool at Picketston.

The Energy Centre would house a biomass steam boiler which will feed a steam turbine to generate a proportion of the development's electrical required whilst meeting the entire base heat load. A proportion of the associated heat which is typically wasted with conventional power stations will be used to provide heating and hot water to the DTC via a system of buried pipework referred to as a district heating system (CHP). This district heating system will comprise MTHW (medium temperature hot water) distributed around the majority of the DTC site via a ring main arrangement of buried pre-insulated steel pipes. The energy derived from this central source will deliver heating, hot water and electricity to support the training function of the DTC

Notwithstanding the clear benefits associated with the use of a CHP plant in terms, it will still be necessary through the detailed submissions to ensure that the physical impact of the centre is assessed and mitigated where necessary, and to ensure that the activities associated with the centre (such as deliveries, hours of delivery and use, odour / air quality emissions, noise control etc are satisfactorily considered through a detailed examination of the proposals.

In addition, it will be necessary to ensure the development satisfactorily accords with the proximity principle in terms of fuel sourcing, and in this respect submissions indicate that, while a proportion of the fuel supply may need to be imported initially at the time of first operation of the plant in 2014, it is expected that the Welsh Biomass market will be further developed and will be able to supply some, if not all of the fuel requirements of the proposed energy centre in due course.

Clearly there are a number of issues arising from a proposed energy centre that would need detailed consideration at reserved matters stage, and through the environmental permitting regime, not least the potential impacts on air quality and local amenity. In this respect, the ES notes that there could be potential effects from the biomass CHP plant as a result of the pollutants from the stack of the plant, and that receptors which could be affected are likely to be those residential receptors and designated ecological receptors in the local area surrounding the

site (defined as within 10 km of the stack). This would include the new residential accommodation on and offsite.

At outline stage, however, it is concluded that the principle of accommodating such a development is entirely acceptable in sustainability terms, that its location within the masterplan appears entirely logical, and that the environmental impacts of the plant can be acceptably managed through design and condition, and through detailed consideration through the Environment Agency's own permitting programme.

13.11 Other Matters – Car Parking Strategy

The key design principles for the parking arrangements at the DTC have been largely influenced by the security requirements to locate parking 25m away from living / training accommodation. This principle has influenced the creation of a perimeter road within East Camp where parking is offset from the security boundary. This has also had the benefit of keeping vehicles away from the primary circulation areas within the central parts of the site.

While the strategy of siting car parking on the outside of the 'core' of the site has the potential to increase impact from outside of the site, subject to appropriate controls over the landscape strategy for these areas, it is considered that there would be no demonstrable harm from such a strategic choice.

13.12 Other Matters - Lighting

Although 'within the wire', given the intensity of the use and the potential impact upon night time views from nearby and at a distance, the provision of an appropriate lighting strategy will be important. A lighting strategy has been submitted which covers such matters (compliance with which can be controlled by condition) and addresses the need for "an aesthetically pleasing yet environmentally sensitive solution", while also referring to the need to control light pollution due to the existing runways.

13.13 Other Matters – Security

As befits its military use, a continuous perimeter boundary fence will surround the secure areas of the DTC at East Camp (and parts of the Picketston site).

14. SITE / DEVELOPMENT –SPECIFIC : “OUTSIDE THE WIRE”

This section of the report seeks to deal with the primary development 'outside the wire' (excluding highways related matters and provision of Service Families Accommodation, which are considered elsewhere in detail). Such development areas are considered in turn below: -

14.1 Northern Access Road

Access to the DTC, hotel, crèche, leisure facilities and three of the new SFA sites will be via a new Northern Access Road (NAR), the details of which have been included in full for consideration at this outline stage. The new NAR will be built from the B4265 between Boverton and Llanmaes Traffic Signal Junctions and designed to Design Manual for Roads and Bridges (DMRB) standards. A combined footway/cycleway link to existing public transport (bus and train) facilities is included in the design of the NAR. It is proposed that street lighting will be provided along the entire length of the NAR.

Traffic to and from the site will therefore be provided with direct access onto the B4265, that bypasses both Llantwit Major and St Athan. To reduce traffic movements through St. Athan village, all junctions to the DTC have been designed to prevent access by westbound vehicles. It is envisaged a Traffic Regulation Order (TRO) will be needed to restrict westbound vehicles turning left in to DTC from Eglwys Brewis Road, which can be controlled by condition. Furthermore, access eastbound to St Athan from the DTC & ABP junctions on the NAR will not be permitted.

The DTC will have three main accesses off the NAR via three gates which will provide both vehicular and pedestrian access to the restricted areas within the site. Gate 1 is the main entrance for military staff, trainees and visitors; Gate 2 is a separate entrance for service and delivery vehicles; and Gate 3 is the entrance/exit to the Picketston site, located to the north of Eglwys Brewis Road opposite the Gate 2 entrance which will accommodate DTC site and Facility Management staff traffic, with the latter using the car park proposed to the north of Eglwys Brewis Road.



Figure 6: Proposed Northern Access Road including (in part) Service Families Accommodation sites accessed off the NAR

The Council, as highway authority is satisfied that the design of the NAR complies with national guidance and highway standards. New junctions serving the DTC and ABP sites will be self policing in reinforcing the direction of the traffic flows arriving and departing via the NAR and B4265. The design of the NAR has been developed having regard to the operational needs of the ABP and DTC combined.

Various junction configurations were considered for the main junction onto the B4265 before the signalised acute Tee junction was finally adopted. This form allows for the junction into the SFA at Tremains Farm to be optimally positioned to accommodate the required vision splay and stacking queue length on the NAR from the B4265 and the bridge over the Brook as well as accommodating military convoys turning onto the NAR from the B4265.

Junctions are proposed at various points along the NAR to access the following:

- Tremains Farm SFA site;
- Llanmaes Lane, the Caravan Park and Picketston South West SFA site;
- North of West Camp SFA site;
- DTC hotel, community & sports facilities;
- Eglwys Brewis Road;
- ABP North – traffic signal controlled junction with restricted movements on the south side;
- Crash gate emergency vehicle access on the south side;
- DTC Gate 1 (Main Access) – traffic signal controlled junction with restricted movements on the south side.
- DTC Gate 2 (RID) and Gate 3 (FTA) – traffic signal controlled junction with restricted movements on the north and south sides;
- Picketston Lane junction with restricted movements on the north side;
- Picketston Close on the north side;

Junction spacing along the NAR accord with highway standards and policy, with entrances to the ABP and DTC being secured by controlled barriers. Additional off-highway parking is being provided near to the NAR outside the secure perimeter fence to reduce the impact of entry controls at these security barriers upon the public highway.

At the main gate the NAR joins the existing unnamed road which joins up with Cowbridge Road to the east. Plan no. '003622/PA/1514' shows new access points from this road to serve the Museum and Spar shop to the east of the main gate. However, these details are not submitted for full consideration at this stage.

The principle of accepting the concept of the Northern Access Road across (in part) greenfield land has been considered above at **section 12.3** which provides an analysis of the rationale for a new highway in this location, as well as the alternative options that have been considered and discounted.

However, whilst the principle of the NAR has been accepted, it is nevertheless necessary to provide a full assessment of this element of the development, to understand and consider its acceptability in visual impact terms. This section therefore considers the physical impact of the NAR, including matters such as its width, form (including footway / cycleways) and lighting.

14.1.1 NAR – Consideration of Impacts

In summary, the NAR proposals involve the provision of approximately 1.8km of new carriageway, which would link the B4265 through to Eglwys Brewis Road, joining the existing highway to the west of it's junction with Picketston Close.

The access point onto the B4265 would be sited approximately 500m south of the junction with Llanmaes and 550m north of the junction with Eglwys Brewis Road. It would run broadly parallel with Eglwys Brewis road, at a distance of between 200m and 250m.

Given the undulations in existing ground levels along the proposed route of the NAR, the height of the proposed road relative to the existing land would vary, however, in the main it would lie between the existing ground level and approximately 1.5m-2m above existing ground level. For limited sections of its route there would be greater differentials between the existing land and the carriageway, most notably where it crosses the Llanmaes Brook, approximately 7m-8m above the existing lie of the land for a distance of some 70 metres. In this regard and in this particular instance, the width of the dip within which the brook lies largely dictates the level of the new road and the height of its crossing. Once the road traverses this dip in the landform, it then closely follows the level of the existing land.

Either side of the proposed new carriageway the land would be graded down to the level of the adjoining field, with the exact profile being dependent on the height of the road. The carriageway varies in width between approximately 9m and 12m, depending on its section and the proximity to junctions into the SFA sites. The development as a whole, including the graded banks on either side, measures up to a width of 18m.

14.1.2 Landscape and Visual Impacts from surrounding views

The primary views and impacts of the proposed NAR within the wider landscape are summarised below:

From Public Rights Of Way (PROW) East and South East of Llanmaes:

- Clear views of the NAR from the PROW network to the north west.
- Views, nevertheless are partially screened by planting along the northern edge.

From PROW north of Llanmaes

- Only partially visible from broken points and at longer range views.
- As a result of the above, less significant impacts would be felt, with a less appreciable change in the character of the land.

From Llanmaes village

- NAR visible at a distance of approximately 500m.
- Higher impacts from the south east sections of the village, with the development less appreciable from the northern sections.
- Views would be filtered by hedgerows along northern edge and along the southern edge adjacent to Tremains Farm SFA.

Millands

- Direct and close range views of the NAR, particularly where elevated to cross Llanmaes Brook, resulting in a notable change in character.
- Partially screened by proposed hedgerows and a false cutting, although it is considered unlikely that this would fully screen views.

Froglands and surrounding dwellings

- Direct and close range views of the NAR from the area around Froglands Farm and Old Froglands.
- Partial screening from the proposed hedgerows, however, given the proximity, unlikely to provide full screening at particularly close range.

Eglwys Brewis

- Highly visible from residential properties around Picketston Close around the western part of the settlement,
- The level of impact would decrease with distance to the east and north (around Chestnut Avenue and Elm Grove). From these points the road would only be particularly appreciable from first floor rooms.
- Close range and oblique views of the NAR around Eglwys Brewis Church and Lime Grove.

St. Athan.

- Given the distance from St. Athan village to the site, and the density of existing buildings within the existing West Camp between it and the proposed NAR, its visual impact will not be significant.

14.1.3 Analysis of landscape impacts from surrounding viewpoints

Given the length and general form of the proposed NAR, and the unspoilt rural character of the land at present, the construction of a formalised NAR will undoubtedly have a significant visual impact on the wider landscape. The natural topography of the surrounding areas of countryside to the north will also provide views of the road from higher ground, ensuring that it is highly visible from a series of public viewpoints.

Its direct proximity to a number of existing dwellings along its route will also result in significant close range landscape changes for a number of individual properties, as well as an appreciable increase in traffic activity.

The Environmental Statement acknowledges that significant changes to views would be experienced by visual receptors up to 1km from the development site boundary and in some instances, buildings, roads and landscape features would be visible immediately adjacent to PROW and residential areas.

However, whilst the changes to the existing landscape would be significant, given the magnitude of change, it is not considered that this in itself renders the development fundamentally unacceptable. As noted above, the approved St. Athan Development Brief includes a new access road in this broad location, and this has been accepted in highway safety and logistical terms as the most appropriate location for an access to the DTC and ABP developments.

Along the eastern section of its route the NAR would follow the approximate height of the existing land, however along other sections, generally in the western part closer to the B4265, it would be constructed to a raised level, most notably where it would cross the Llanmaes Brook, just to the east of the junction with the Tremains Farm SFA site.

However, whilst this would serve to increase its visual impact within the wider landscape from certain viewpoints to the north and north east, it is considered that the height differential would not be significant in the wider context and would not markedly add to the visual impact of the development as a whole. It should also be noted that from these views to the north, this section of the road would be viewed directly against the backdrop of new housing within Tremains Farm and existing housing at West Camp.

It is accepted that the road would lie at a significantly higher level than the existing land where it crosses the brook, however, this differential is relative to the level of the watercourse, which lies in a marked depression in the landscape. The bridge is also required at this height to accommodate the new access track to Millands Farm, which would be most appropriately and sensitively sited under the NAR, as opposed to creating a more visually intrusive crossing point above it.

The areas of land either side of the bridge would require a more substantial degree of grading and landscaping to mitigate the impact of the change in levels, however, it is considered that this would, in time effectively assimilate with the adjoining fields. The carriageway would then closely follow the height of the land on either side where it rejoins the more consistent topography.

Therefore, whilst the objections received in respect of these matters have been fully considered, it is considered misleading to suggest that the highway would be appreciably viewed within the wider landscape as sitting 7-8m above the general lie of the land, given that this is a direct result of a dip in one location along its length, and the fundamental need to maintain a vehicular access to Millands Farm.

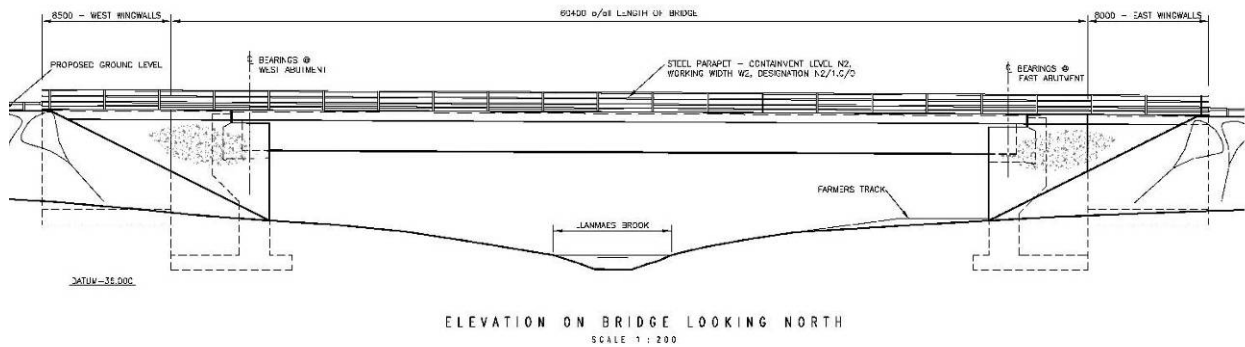


Figure 7: NAR Bridge over Llanmaes Brook (extract from dwg 003622/B1/01)

In terms of siting, the NAR would run tightly along the northern boundaries of the SFA developments at 'Tremains Farm' and 'North of West Camp', and would effectively create a physical and defensible barrier to enclose these parcels of land. Given the close physical relationship between the road, the SFA sites and the existing West Camp, it is considered that the NAR would appear as an appropriately sited and clearly defined physical barrier, which would effectively denote the upper limits of the wider MoD site, without appearing as an arbitrary incursion running through the rural landscape. Regard must therefore be given to the fact that the NAR is one element of a wider comprehensive master plan for the site.

It is also accepted that there would be an increased level of light pollution from wider viewpoints, particularly to the north and north west, however, this would largely appear as a continuation of the existing and proposed residential areas further south. Therefore, whilst also contributing to the general change in character of the landscape, it is not considered that degree of additional light trespass would unacceptably impact upon the wider countryside. The means of lighting and the level and spread of illumination are matters that can be influenced by the Council, both as local planning and highway authority.

Notwithstanding the above, both sides of the NAR route are to be lined with substantial landscaped buffers, which would serve to partially screen and filter views of the NAR from short and long range views, thereby serving to mitigate its impacts. Whilst it is accepted that the effect of the landscaping would be limited in the short term, it is considered that it would significantly soften the visual impact of the road in time, to the point where it would effectively reduce its impacts.

Having regard to the above it is considered that the proposed NAR, while fundamentally changing the character of the existing landscape, would nevertheless through careful design and landscaping, assimilate into the surroundings such that it would not unacceptably impact upon the character of the wider area in the long term.

14.1.4 Impact on existing residential properties

In addition to the wider landscape impacts identified above, it is also accepted that the proposed NAR would result in localised impacts on the residential amenities of specific properties.

The NAR would run particularly close to dwellings at Millands Farm and Caravan Park, and the small cluster of dwellings around Froglands Farm. For these residents, there would be an appreciable increase in close range movement and activity, which would contrast with the more peaceful rural setting that they currently sit within. However, whilst these residents would be likely to experience a higher level of general disturbance, activity and light trespass than at present, it is not considered that this would be to an unacceptable degree.

It is considered that the NAR would be sited sufficiently far away from these properties such that it would not generate a level of noise that would unreasonably impinge on their basic living condition, nor the conditions that would normally be expected in a typical residential area. Whilst it is accepted that the occupants of these properties have become accustomed to higher levels of general residential amenity, given their rural location, this does not imply the unacceptability in principle of a scheme that results in a material change to those living conditions.

Specifically in terms of light pollution, it is considered that impacts on the closest properties from headlight glare would be largely mitigated by the proposed landscaping, particularly when it has become more mature. Whilst properties further away to the north and south may appreciate an additional level of light above the existing baseline level, this would not be so close as to unreasonably affect their living environment.

Therefore, having regard to the above it is considered that, whilst the NAR would have the effect of changing the existing rural setting currently enjoyed by these dwellings, the direct impacts would not be so severe as to unacceptably impact upon living conditions.

It is clear that issues relating to the scale and impacts of the NAR are matters of significant concern to local residents. In dealing with issues raised by residents regarding the impact of the proposed NAR, the WAG has commented as follows:

The letter from Llanmaes Community Council alleges that the NAR will run within 15 metres of Millands Caravan Park. This is incorrect: at its closest the nearest edge of the kerbline of the NAR is over 65 metres from the caravan park.

The NAR has been designed to ensure that it follows the existing profile of the topography as best as possible to minimise the extent of earthworks required. It will in general be around 1500 to 1700mm above existing ground level as it passes south of Millands Park, reducing to 1000mm at Froglands Farm. The Llanmaes Brook sits in a dip or valley some 7 metres below the surrounding topography and again the finished level of the carriageway at the bridge is approximately 1500mm above the surrounding topography.

The new road will be lit along its entire length with overhead lanterns placed on columns. These lanterns have been designed such that the 'beam' of light provided is restricted into the form of a 'downlight' rather than a 'spread' of light that is found on some older forms of lantern. In addition, if it is felt necessary by the Local Authority to provide even more restriction to potential side glare then the provision of baffles will be investigated.

Detailed photomontages of the views from Llanmaes and Millands Park toward the NAR have been undertaken and are included within the Planning Application Documentation.

The design of the NAR includes for landscaping and mitigation and these photomontages show the limited visual intrusion that will exist after construction of the NAR and in 15 to 20 years after opening.

In respect of the NAR, existing landform and the proposed vertical alignment of the proposed road will provide significant screening. The junction of the NAR with the B4265 takes the form of a signalised y, the signalised element of which extends over a length of approximately 100 metres. The remainder of the junction will provide the required merge and diverge lanes to the NAR the full extent of which will involve the removal of an area of existing scrub amounting to just over 400m. This scrub has established on the cutting slopes of the B4265. It contributes to the vegetation pattern of the area, illustrating the effectiveness of planting in mitigating the negative visual effects of roads.

The vertical alignment of the northern access road and its junction with the B4265, and intervening field boundary hedgerows in this location help to ensure effective screening of views from Llanmaes, as illustrated in photomontage no. PM.01-1. In addition, as part of our proposals there will be a significant amount of new landscaping provision at this location to mitigate for the loss of existing vegetation and enhancement of the remaining.

The valley of Llanmaes Brook provides the opportunity for views towards the northern access road and the proposed bridge over Llanmaes Brook. However, the landform of the valley limits the extent of the area from which views of the bridge are available. Intervening vegetation further limits the extent of views to those broadly along the line of the valley. Existing field boundary hedgerows soften the appearance of the bridge where landform allows views of the bridge; refer to photomontage no. PM.01-1.

The intervening hedgerows, which line the arable and pastoral fields, will provide partial screening, as will the network of hedges which border the local unclassified side roads and lanes. In addition the local topography will generally only allow oblique views towards the proposed development and provide a level of visual separation.

The landscape planting proposals include hedgerows along the northern edge of the Northern Access Road (NAR), with a hedge on bank (giving the appearance of a false cutting) on the section of highway between Llanmaes Brook and Rose Cottage, which will provide increased screening. A gentle slope to the north will enable this area to be returned to agricultural use enhancing its integration into the surrounding landscape. Hedgerow and woodland planting is proposed along the southern NAR boundary adjacent to the Tremains Farm SFA and North of West Camp SFA.

The screening effect of these planting proposals is shown on the photomontage no. PM.02-2 which illustrates the effect of the false cutting and earth modelling to integrate the proposed highway landscape on completion of the works and the further mitigation of the visual impact obtained through the highway hedge planting after 10-15 years.

In conclusion, the impacts as a consequence of the new NAR are noted. However the impacts do not in themselves render the scheme unacceptable particularly given that the NAR is one element of a more significant comprehensive scheme. The NAR will allow direct road access to the site and will also include facilities for pedestrians and cyclists. In addition, conditions are imposed to reduce the impacts of the new road, and conditions will also require full landscaping implementation as well as details of lighting.

14.2 Other Highway Schemes

This section deals with the other highway works which have been specifically designed with road traffic users in mind. The proposals for sustainable transport infrastructure are considered elsewhere in the report at section 15.2.

14.2.1 Off-site Highway Works

There are a number of highway improvement works proposed which are required as a result of the development in mitigation of the effects of these schemes upon the local highway network:

- i. Improvements to Eglwys Brewis Road (details submitted for approval now)
- ii. Improved traffic signals on B4265 at Llanmaes / Llantwit Major Junction (illustrative only)
- iii. New traffic signals on B4265 at Gileston Cross / St. Athan Junction (illustrative only)
- iv. Road improvements on B4265 at Gileston to Old Mill, Aberthaw (details submitted for approval now)
- v. Junction improvements at Weycock Cross, Barry (illustrative only)

These will be the subject of highway agreements to specify the detailed design and delivery mechanisms. The various highway improvements and road constructions will require sections of highway to be diverted or stopped up either by using powers contained within S247 T&CPA 1990 or by using the provisions of S116/117 of the Highways Act 1980 or restricted by means of Traffic Regulation Orders as appropriate.

It will also be necessary to control the phasing of the delivery of the highway works to coincide with the phasing of the development. This will be done through conditions.

14.2.2.1 Improvements to Eglwys Brewis Road (Plan No. 003622/PA/650)

Prior to the commencement of the NAR minor highway safety improvements to Eglwys Brewis Road will be carried out to enable its use by construction traffic until the NAR is available. The works include minor widening of the road up to 5m to the west of the Old Brewery Public House and up to 5.5m to the east of this point, and provision of a HGV passing bay on the south side approximately 80m west of the turn for Froglands Farm. These details are submitted in full for consideration at this outline stage and the Highway Authority are satisfied with the proposed works. These changes are not considered to have any significant impact on the area or nearby properties, while they are considered to be necessary to mitigate the short-term impacts of the development on this route.

At a later phase further works are proposed to improve pedestrian and public transport facilities on Eglwys Brewis Road to serve the future occupiers of the SFA. These are detailed separately under sustainable transport provisions.

14.2.2.2 B4265 at Llanmaes / Llantwit Major Junction (Plan No. 003622/WD/014'C')

Improvements are planned at the existing B4265 / Llanmaes Road junction to provide for enhanced pedestrian crossing points with drop kerbs and tactile paving to link up with the new footway / cycleway on the northern side of the B4265. The work will be carried out within the limits of the existing highway. These improvements are required to provide for the future users of the development when it is occupied rather than being necessary during the construction phase, therefore they must be provided prior to beneficial occupation of the development.

14.2.2.3 B4265 at Gileston Cross / St. Athan (Plan No. 003622/PA/350)

The TA analysis has shown that there would be a capacity problem at the existing B4265/St Athan Crossroads for right turning traffic. Therefore a signalised junction with right turning facility and pedestrian phasing has been proposed in mitigation (illustrative details only). The works include an on-line widening of the B4265 to accommodate additional traffic lanes for a signal controlled junction, pedestrian crossing points with drop kerbs, tactile paving, footpath diversions and a pedestrian phase within the signal controls to maintain pedestrian access, and street lighting. The proposal also involves introducing a bus lay-by to serve the existing bus shelter stop at the junction.

These works can be provided within the limits of the adopted highway and will be required to be completed prior to the peak construction traffic in the interests of highway safety. It is hoped these works will also have benefits for road safety at a current accident cluster point, as identified in the TA (paragraph 11.2.33).

14.2.2.4 Improvements to Gileston Old Mill highway (Plan No. 003622/PA/420)

The off site highway works include improvements to the B4265 at Gileston – Old Mill which have been submitted in full for consideration at this outline stage. The works involve diverting the existing highway to the south to straighten this stretch of road, together with verge widening at several points to improve visibility splays.

The improvement comprises 0.6km of on and off line improvements of the B4265 to improve safety standards of the existing highway. The design speed for the realignment is 100kph (60mph) and the planning application includes land that would need to be acquired at the eastern and western ends of the proposed improvement to maintain full stopping sight distance.

The carriageway is designed to rural S2 standards and there are no proposed relaxations or departures from standard. Earthworks for the proposals necessitate the extension of the existing overhead sewer. This has been accommodated by the provision of a pipe bridge, designed in conjunction with Dwr Cymru/Welsh Water. In order to facilitate future maintenance requirements for the pipe bridge, it is proposed that the superseded section of the B4265 will retain its 'highway' status to be re-designated as a lay-by. This will also provide an alternative route for traffic should the new B4265 need to be closed for maintenance of the sewer. Street lighting is not proposed for this rural improvement.

The proposal also involves a minor diversion of the public footpath and new DDA compliant ramped provision proposed through the lay-by which was the previous road route.

The construction of the Gileston – Old Mill highway improvement is required for highway safety. This scheme is amongst those identified in UDP Policy TRAN 2 – Local Highways and is supported by the Highway Authority. These works will be carried out under a S278 Agreement of the Highways Act 1980. These works will be undertaken in advance of the main build programme for the ABP and SFA sites (see Appendix A of the Construction Travel Plan).

14.2.2.5 Junction improvements at Waycock Cross (Plan No. 003622/PA/540'A')

The existing Waycock Cross roundabout does not have sufficient capacity to function effectively with the additional traffic arising from the development. Therefore highway improvements are proposed to increase the capacity of the junction to prevent congestion from the traffic generated by the development. The proposed works are shown on an indicative plan and involve replacing the existing roundabout with a T-junction at the point where the existing Port Road West meets Pontypridd Road by the existing store and petrol station. The scheme proposes a new roundabout to the north-west of the existing and new roads to the east and west to rejoin with the main road further on. On the east side, the stretch of new road runs to the rear (north) of the 8 existing dwellings on the north side of Port Road West.

In summary, the Waycock Cross junction improvement comprises:

- A new roundabout with a 50m inscribed circle diameter (ICD) and 12m wide circulatory carriageway;
- Realignment and widening of the A4226 Port Road West (west of the junction) to provide three approach lanes;
- On-line widening of the A4226 Waycock Road (Five Mile Lane) to provide two approach lanes;
- 0.5km off line diversion of the A4226 Port Road West (east of the junction) to provide a new approach from the east; and
- An amendment within the highway boundary along the B4226 Pontypridd Road to provide additional approach and exit lanes.

The design speed throughout the junction is 60kph (30mph) and there are no relaxations or departures to the design standards. Access to properties along the western side of Pontypridd Road is to be maintained by the provision of a new access road and turning head. Access to properties north of Port Road West is to be maintained as existing, since the superseded section of the A4226 will retain its highway status. Pedestrian provision has been accommodated on a like for like basis through the new junction, maintaining access to public transport facilities. Street lighting is to be provided throughout the junction improvement

This improved junction has been modelled in the TA, which states that no significant capacity problems exist in the scenarios tested for the proposed modified Waycock Cross roundabout. The plan submitted is for outline planning consent and therefore full engineering drawings including drainage details shall be submitted for approval when a full/reserved matters application is made.

The junction has capacity problems with or without the development proposals, therefore its early improvement is desirable. The works will be required prior to beneficial occupation of the DTC.

Persimmon Homes have made representations objecting to the illustrative proposals for the Waycock Cross junction improvements. They have submitted the adjoining land at Walters Farm as a candidate site for the Vale of Glamorgan Local Development Plan (LDP) and consider this aspect of the development may have a blighting effect on their land interest. They argue that the works are unnecessary in view of the traffic likely to be generated from the proposals, are unwarranted because they do not feature in the approved Development Brief for the site and finally are not in sufficient detail for the Council to properly consider at this outline stage. Their transport consultants have advised that works could be carried out to the existing roundabout which would have a similar effect on its operational performance, requiring less land take or removal of hedgerows.

The Council's appointed transport consultants, Parsons Brinckerhoff, were asked to consider this submission. They advise that the TA illustrates that Waycock Cross roundabout exceeds capacity in 2008 and in 2014 without the development and would generate significant queues. Therefore, it is deemed that this evidence is enough of a material consideration to deem improvements to this junction necessary. Furthermore, the letter did not provide modelling results to backup the claims about the alternative proposals.

In terms of the level of detail, the Council is satisfied that the principle of improvements to this junction is acceptable and will be necessary to ensure the effective future operation of this junction. The detail will be subject to a reserved matters application at which time the most appropriate design for the improvements can be considered in more detail. The lack of detailed design at this stage is not considered to represent a reason for refusal of this application.

14.3 Service Families Accommodation (SFA)

14.3.1 Introduction and Background

As advised earlier within the body of this report, in order to support the proposed Defence Technical College (DTC) at St Athan, the Ministry of Defence (MoD) needs to provide adequate living accommodation for entitled service personnel working or studying at the facility and their families. This takes two forms:

- Single Living Accommodation (SLA); and
- Service Families' Accommodation (SFA).

SFA is regarded as housing for military personnel and their families, many of whom would not be able to buy or rent in the private housing market. In addition, many of those who will occupy the SFA will be staying in the area for only a short time whilst at the DTC, some students for up to one year only and certain other military personnel for up to three years. As advised previously, there is a requirement for 483 no. SFA dwellings to be provided to serve the proposed development, prior to 2014.

The MoD has identified a particular mix of house types for the new build units to accommodate the various officers' and servicemen's families, which is shown in the following table:

House Type	Persons	Bedrooms	No. of Units
Officer's Families Quarters			
II	6-7	4-5	2
III	6	4	33
IV	6	4	51
V	5	3	42
Sub-total			128
Servicemen's Families' Quarters			
C	5	3	249
D	7	4	106
Sub-total			355
Total			483

The 483 units are proposed on the following sites, of which more detailed analysis is provided later in the report:

- Land at Tremains Farm, at the western end of the site, directly across the B4265 from Boverton (169 units on 8.76 ha)
- Land north of West Camp (59 units on 3.82 ha)
- Land at South West Picketston, directly across the new access road from the 'land north of West Camp' (83 units on 4.88 ha)
- Golf course, east of existing housing on Flemingston Road and directly north of the golf course (172 units on 8.02 ha)

The following section sets out the main MoD design and layout principles that underpin the SFA developments and the factors that have guided these principles- legislative, prescriptive standards specific to MoD developments and other planning considerations.

It will provide a general overview of the parameters within which the SFA dwellings must be built within and the ways that the principles of sustainable development will be addressed.

The MoD requires a high quality, modern form of housing that is constructed to prescribed standards, that being Grade 1 standard of the Joint Services Publication Accommodation Code-JSP, JSP 315 Services Accommodation Code. The relevant scales of the code are Scale 21 for officers' families' quarters (OFQ) and Scale 22 for servicemen's families' quarters (SFQ). These scales set out specific requirements for layout design, house type design and specification and include:

- House size

- The aesthetics of the built environment
- Amenity space provision, inc refuse, storage, patios etc.
- Parking
- Play area provision
- Access to dwellings
- Security

As noted above, house type and layout is largely dictated by the standards set out in the JSP Accommodation Code. In this case, OFQ dwellings must meet specific floor space requirements, have 15m long gardens and be served by garages of size 5.3m x 3.0m (6.1m x 3m in case of the 2 largest dwellings). SFQ dwellings are smaller in size, with gardens of 10.5m in length and garages of 5.3m x 3m.

The quarters are generally of 2-storey construction with some 3-storey town houses, the majority of which are to be semi-detached.

OFQ types III, IV & V are essentially family houses, but for type II there is a need for senior officers to accommodate and entertain official guests and they must stand in their own grounds.

In terms of Open Space and Recreation, the MoD has specific requirements for the provision of children's play areas which are set out in the document *Children's Play Areas Design Guide* (MoD, second edition, December 1995). In terms of the level of provision, the MoD guidance requires the various categories of play areas to be within certain walking distances of each home.

Whilst the above will, therefore, to some degree dictate the level and location of children's play facilities and open space, the developments will be principally assessed in policy terms against Policies REC 3- Provision of Open space Within New Residential Developments and REC 6- Children's Playing Facilities, of the Vale of Glamorgan Adopted Unitary Development Plan 1996-2011 and national Planning Policy in the form of Planning Policy Wales Technical Advice Note 16: Sport, Recreation and Open Space

UDP Policy REC 3 requires open space to be provided at a minimum standard of 2.43 hectares per 1000 population, comprised of 0.6-0.8 hectares for children's playing space and 1.6-1.8 hectares for outdoor sport. Within this provision UDP Policy REC 6 requires children's play facilities to be provided at a standard of 0.2-0.3 hectares per 1000 population. The 4 parcels of Service Family Accommodation (SFA) each provide areas of formal and informal public open space on site to serve the needs of future occupiers.

TAN 16 notes that the standard of recreation provision should be based on the results of an Open Space Assessment process undertaken by the local planning authority and also refers to *Planning and Design for Outdoor Sport and Play*, by the National Playing Fields Association/ Fields in Trust (FIT), dated 2008, which provides 'benchmark standards' for outdoor sport and play.

The SFA Design and Access Statement uses the 'Benchmark Standards' referred to above and projected household size for the Vale of Glamorgan for the year 2016 to determine the overall level of open space that is required to be provided within the SFA estates. This would equate to a population of at least 1100 people, producing a requirement of 2.73 hectares, comprising 1.88 hectares for outdoor sport and 0.85 hectares for children's play space.

It should be noted that the calculations have been made on the basis of average household size in the Vale of Glamorgan. In view of the fact that the SFA is specifically making provision for service personnel with families, it is likely that the average household size within the SFA will be larger than the Council's projected average household size throughout the whole of the Vale of Glamorgan, which includes single person and non-child households. This would result in a larger population which would require an increased level of open space, which is considered further below.

Within the site specific illustrative layouts, the SFA Design and Access statement states the sites would cumulatively provide 1.1 hectares of children's play space and 1.48 hectares of other informal open space, equating to 2.58 hectares in total. This is broken down as follows:

Land at Tremains Farm proposes 169 units, which requires at least 0.23 hectares of children's playing space including at least 0.08 hectares of children's play facilities (based on the Council's formula contained in the Planning Obligations SPG and average household size in the Vale of Glamorgan). The indicative details show provision for 0.36 hectares of open space for children's play including 1 no. local equipped area for play (LEAP), and 1.04 hectares of informal open space. A LEAP is an unsupervised play area for children of early school age (4-8 years mainly) containing at least five types of play equipment. LEAPs comprise an activity zone of 400m² with a surrounding 10m wide buffer zone.

Land north of West Camp proposes 59 units which require at least 0.08 hectares of children's playing space including at least 0.03 hectares of children's play facilities. The indicative details show provision for 0.13 hectares of open space for children's play including 2 no. local areas for play (LAP), and 0.17 hectares of informal open space. A LAP is a small area of unsupervised open space specifically designated for young children (4-6 years) for play activities close to where they live. LAPs comprise an activity zone of 100m² with a 5m wide buffer zone around.

Land at South West Picketston proposes 83 units which require at least 0.11 hectares of children's playing space including at least 0.04 hectares of children's play facilities. The indicative details show provision for 0.25 hectares of open space for children's play including 1 no. local area for play (LAP) and 1 no. local equipped area for play (LEAP). This site also includes 0.27 hectares of informal open space.

The golf course site proposes 172 units which require at least 0.24 hectares of children's playing space including at least 0.08 hectares of children's play facilities. The indicative details show provision for 0.36 hectares of open space for children's play including 1 no. local area for play (LAP) and 1 no. local equipped area for play (LEAP). However, this layout does not make any provision for additional informal open space.

The indicative site layouts show sufficient onsite provision to satisfy the requirements of UDP policy REC 6 in as far as it relates to children's playing space and this will be secured by condition, however, cumulatively the sites do fall short of the minimum overall public open space requirement, particularly in respect of outdoor sport. Policy REC 3 and the National Playing Fields Association/ Fields in Trust (FIT) benchmark standards both explicitly refer to space for outdoor sport, which is defined in TAN 16 as more formalised sports facilities such as playing fields, whereas the 1.48 hectares of open space (aggregated from the four layouts in the DAS) is referred to as 'informal space'. It appears from the illustrative plans that this space comprises a mix of incidental areas and landscaping, and does not necessarily satisfy the definition of space for outdoor sport.

However, regard must be paid to the extensive additional open space and recreational facilities which form part of the development proposals to be provided at Picketston, which would further satisfy the recreational needs of the future occupiers of the SFA. Therefore, having regard to the above and the relatively small shortfall within the SFA sites, it is considered that the overall level of public open space to be provided on site to serve the future occupiers of the SFA development is acceptable and can be controlled with appropriate conditions.

The applicants have indicated that the areas of public open space to be provided on site will be managed and maintained by them, rather than being transferred or adopted by the Council. Therefore, there are no commuted sums for maintenance in this case. However, a condition is recommended requiring provision of a management plan for approval by the Local Planning Authority.

With reference to Sustainability, in order to ensure that the SFA developments are as sustainable as possible, it is the MoD's preference to site the SFA developments near to the DTC. It is envisaged that this would reduce journey distances and encourage more sustainable forms of transport such as walking and cycling. In addition, siting the SFA near to existing settlements of Llantwit Major and St. Athan would ensure that residents are located near to existing public transport infrastructure and interchanges, and other local services. The St. Athan Development Brief promotes the use of a sequential approach to site selection, within which the inherent sustainability of the location is a key factor, and accordingly your officers support the principle of siting the SFA close to the DTC.

The Code for Sustainable Homes represents a tool to objectively and consistently assess the sustainability credentials of a residential development, and is designed to improve the overall sustainability of new homes by setting a single framework within which the home building industry can design and construct homes to higher environmental standards.

The Welsh Assembly Government announced in December 2007 that it was adopting the Code for all new social housing and in July 2008, the Minister for Environment, Sustainability and Housing announced that, with effect from April 2009, she was extending the use of the Code as the preferred method for assessing the sustainability of all new housing built in Wales. National planning policy now sets Code Level 3 as the requirement for new housing on all major developments.

The SFA Design and Access Statement advises that all of the sites proposed for SFA are on land owned by the Welsh Ministers and in recognition of the Assembly Government's commitment to sustainable development, it will be a requirement of the Assembly Government that the development of SFA on Assembly-owned land will be to Code Level 4 of the Code for Sustainable Homes.

The achievement of Code Level 4 demands a significant improvement over a "standard" house built purely to comply with Building Regulations, most notably in terms of reduced energy consumption, carbon dioxide emissions, and water consumption. Despite this, Code Level 4 does not necessitate a complete departure from traditional building practices or designs, and a Code Level 4 dwelling may be outwardly almost indistinguishable from what has become viewed as a 'standard' dwelling.

Given the outline nature of the application, specific information on how the developments within each site will meet this level have not been submitted but would be required at the reserved matters stage.

However, in terms of location, the three sites adjacent to the proposed NAR are all within walking and cycling distance from the DTC, as well as regular bus routes along Eglwys Brewis Road. These sites are located within walking distance from the public transport interchange and general services within Llantwit Major, and are well placed to take advantage of the existing pedestrian link through to Monmouth Way as well as the new pedestrian and cycle link along the B4265 to Llanmaes Road.

The site at the golf course is located in close proximity to regular bus routes through St. Athan, and within walking and cycling distance from the main gate of the DTC. It is also well served by existing local community and recreational facilities such as the Gathering Place at the junction of Flemingston Road, and the adjacent golf course.

It will also be important to ensure that the residential developments are designed to encourage walking and cycling, though good pedestrian links through to existing roads and services surrounding the sites, and permeability throughout the estates.

With reference to Vision and Design Principles, whilst having regard to the Joint Services Publication and the standards that must be adhered to, the SFA Design and Access Statement identifies a vision for the residential development to create a *"well-designed, sustainable residential development, which complements the unique rural character of the Vale of Glamorgan settlements, especially the relationship between town/village and the surrounding landscape"*.

A series of key principles that underpin this vision have therefore been identified, which aim to ensure the new built environments reflect and complement the unique rural character of the surrounding settlements. These are:

- To reflect the historical character of the local built form and layout, specifically the relationship between village and surrounding countryside;
- To provide a high quality, legible public realm, balanced between the needs of the pedestrian, cyclist and vehicle;
- To retain and enhance any existing landscape features which are important for indigenous wildlife;
- To provide a development of high quality that responds to the area's context whilst also embracing contemporary design; and
- To create sustainable communities.

This necessitated a contextual analysis of the nearby villages within the Vale of Glamorgan, in order to provide a basis to integrate the new housing into the surrounding environment. This included an appraisal of landscape setting, approaches, views, spatial arrangement, organisation of streets and spaces, relationship between buildings and streets, and building character, form and materials.

This in turn has led to the development of a code of design and urban form principles, which provide focused direction for achieving the 'vision' and its underlying principles. These include:

- Merging the landscape and village edges by locating lower density development around the edges of the sites.
- Creating focal points centred around existing landscape or built features and new areas of open space, by siting key buildings of 2 ½ - 3 storeys and continuous building frontages in positions to enclose key spaces, junctions and at points of entry into the site. In doing so, create a network of 'places' formed by buildings having a positive relationship with the streets and spaces
- Designing housing with wide frontages, with terracing or large buildings occurring at key focal points and use substantial garden walling to reinforce the street scene.
- Siting focal buildings in places where they contribute to longer views from both within the site and adjacent areas.
- Creating a strong village form through developments that have both an outward and inward looking aspect, with housing facing outwards towards the surrounding landscape and developments, and inwards around the principal routes through the site and public space.

- Creating a variation in road edge/property boundary treatments to provide articulation, interests and informality, and areas of different character.
- Building to a high quality of design that will relate to the local vernacular in form and appearance, utilising a limited palette of traditional materials and colours to create areas with an identifiable character.
- Providing a distinct and varied townscape/urban form through a combination of different window patterns, variety of depth and width spans, different ridge and eaves heights, detached and semi-detached dwellings, varied materiality and use of features such as bays, porches, architectural detailing etc.

With reference to Highways and Hierarchy of Streets, the SFA Design and Access statement advises that the principles of the Department for Transport document '*Manual For Streets*' are central to the strategy behind the highways layouts in the SFA developments. *Manual For Streets* was published in 2007 and represented a radical change in approach towards residential street design and creating sustainable and inclusive public spaces in and around the highway.

It provides advice and direction to all those involved in the planning and development process and emphasises that streets should be places in which people want to live and spend time in, and are not just transport corridors. In particular, it aims to reduce the impact of vehicles on residential streets by asking practitioners to plan street design intelligently and proactively, and gives a high priority to the needs of pedestrians, cyclists and users of public transport.

Therefore, in order to create a high quality, attractive and sustainable place to live, it is considered that the principles of *Manual For Streets* should be central to the layout design. The SFA proposals seek to implement this guidance in the following ways:

- Designing roads that meander through the sites with varying road widths, to give irregularity and natural traffic calming, and utilising a change in surface materials to denote the highway and pedestrian footway.
- Designing focal spaces located at traffic junctions to slow traffic and create easily identifiable locations to aid wayfinding.
- Creating an efficient, legible transport network based upon loops and minimising cul-de-sacs, to increase connectivity and encourage walking and cycling.
- Larger primary roads will be more formal, with regular carriageway and footway widths, whilst smaller roads will be less formal and more 'organic' in nature. The changes in the carriageway width will infer to motorists where slower speeds are necessary.
- Creating a hierarchy of street types, comprising principal streets, homezones and lanes, the latter of which would represent a more informal network of movement corridors.

- A less 'engineered' approach to highway/access design, which complements the topography of the land and creates shared spaces.

It is of particular importance in this case to ensure the layouts have regard to the above principles, not only for highway safety reasons, but also to encourage walking, cycling and sustainable patterns of movement. An individual assessment of the four respective layouts is provided in the following section,

The landscape strategy for the SFA sites will be taken from the overall landscape strategy for the DTC development as a whole, which contains a more general vision and principles that can be applied to each element of the development.

In summary, the landscape strategy seeks to:

- conserve the current site assets and enhance or reintroduce habitat where appropriate.
- improve levels of biodiversity and reintroduce locally appropriate grasslands, hedgerows, tree and shrub species.
- integrate the development proposals within the surrounding landscape character areas.
- retain significant vegetation where possible and create improved habitats through the establishment of grasslands that reflect historically appropriate species that have been restricted through more recent agricultural management methods.
- 'reclaim' some of the diverse habitat areas lost to agricultural management within the Ogmore/ Llantwit Arable Belt with an improved grassland mix.
- reinforce or establish native hedgerows alongside grassland and smaller areas of woodland/scrub planting.
- introduce new native tree and hedgerow planting where existing vegetation is removed to facilitate the development,
- retain all existing tree and hedgerow planting on whilst 'gapping up' boundaries and hedgerow patterns.

Given that the application is in outline, the landscape strategy is relatively general in its aims and proposals. Subsequent reserved matters or full applications would be required to provide a greater degree of detail in respect of specific landscape proposals that are appropriate for each specific aspect of the development.

In terms of drainage, in order to meet the mandatory element of the Surface Water Run-Off category of CSH Level 4, Sustainable Drainage System (SUDS) are proposed with the aim of ensuring that peak water run-off is no greater post development than it is for the undeveloped green-field site. This would not only minimise the risk of localised flooding on site, but also moderate discharge into sewers and local watercourses that could otherwise contribute towards down-

stream flooding and pollution. This is of particular relevance to the Tremains Farm site, which is located adjacent to Boverton Brook.

In order to further minimise water discharge from the site, the proposal intend to utilise a number of water saving measures including, dual flush low capacity WC cisterns, low flow taps and showers and greywater recycling and/or rainwater harvesting system for WC flushing. Some or all of these measures may be required to assist in meeting the CSH Level 4 requirements in respect of water usage (no more than 105 litres per person per day, compared to 150-160 litres per person in a typical average household).

14.3.2 Tremains Farm

14.3.2.1 Site Description and Context

The site is located to the west of MoD St Athan, 1.3 miles from the DTC main gate. The site is 8.76 hectares (21.7 acres) in area, and comprises farm land. The site is bordered to the west by the B4265 and to the south-west by the railway line. The northern boundary is formed by the proposed Northern Access Road (NAR), which would also be providing access to the Aerospace Business Park . The eastern boundary of the site is determined by land ownership, but is generally formed by the Llanmaes Brook. Eglwys Brewis Road completes the southeast boundary.

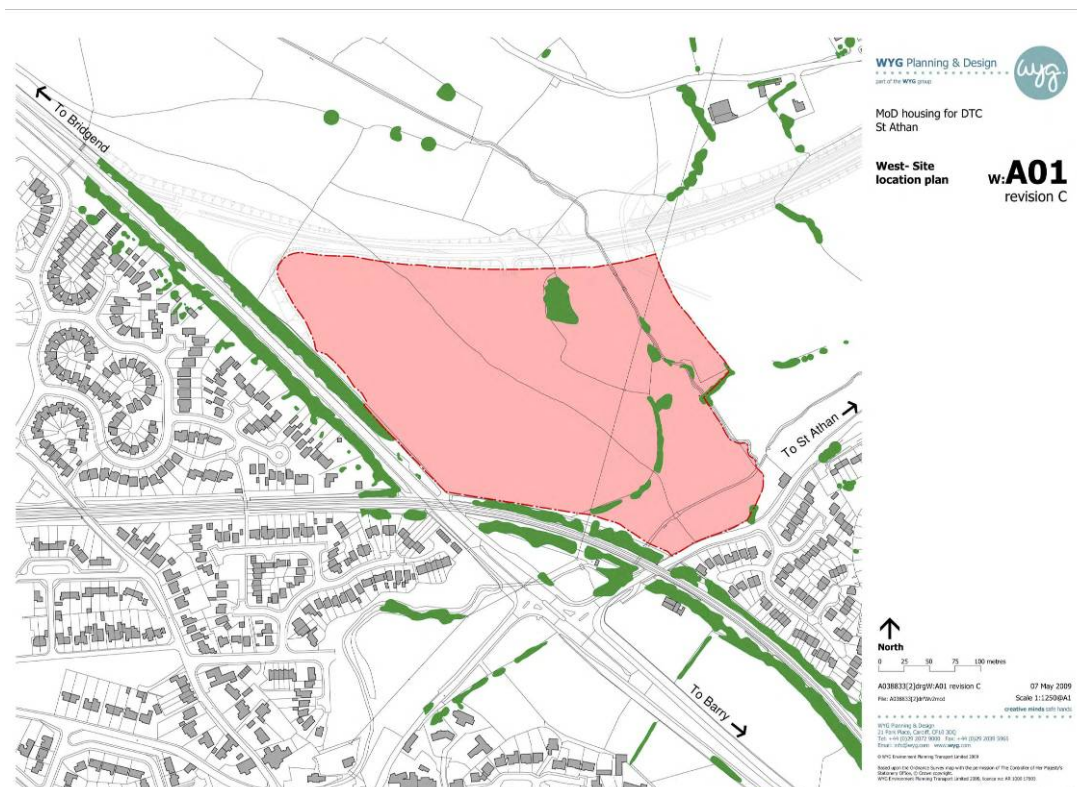


Figure 8: Site Location Plan: Tremains Farm

There are existing hedgerows running through the site and thick hedge/tree cover which provide screening along its western edge adjacent to the B4265. A group of over mature Ash trees is located to the north, and these are to be retained throughout the development. A maintained 'important' hedgerow branches off the group of Ash trees to the south-east where it abuts an overgrown Hawthorn hedge.

The Llanmaes and Boverton Brooks cross the site towards the southern end and an unmarked footpath runs through the centre from north to south. Beyond the site boundaries lie existing service families' accommodation to the south-east and open countryside to the east and north, and the settlement of Llantwit Major lies further west. The existing access point to the site is a pedestrian access, off Eglwys Brewis Road.

The surrounding built environment is made up of a mixture of house types, sizes and tenure, with relatively modern semi-detached and detached houses directly south on Church Meadow, terraces of dwellings to the south west along Eagle Road and detached, semi-detached and terraced dwellings to the west across the B4265. However, the houses to the west that form part of Boverton and Llantwit Major are separated from the site by substantial tree screening on both sides of the highway, and do not appear as being closely physically related to the Tremains Farm site.

14.3.2.2 Topography

The landform lies relatively flat along the most northerly section, and then slopes gently downwards in a south easterly direction towards Eglwys Brewis Road. The land falls from 44m AOD to 34m AOD over a distance of approximately 310m. At Boverton Brook, the site rises to 36m AOD southwards and at Llanmaes Brook, the site rises again to approximately 39m AOD eastwards.

14.3.2.3 Site Development Considerations

Having regard to the above site's surrounding context and its physical and natural characteristics, the submitted Design and Access Statement lists the following as the key constraints and opportunities in respect of this site's development:

- The site is crossed by 33 kV overhead power lines, which require a considerable buffer to residential development.
- A public foul sewer runs across the site, adjacent to Llanmaes Brook.
- A small part of the site, associated with the brooks, lies within a Zone C2 flood zone, the extent of which has been defined by site specific modelling. This reduces the 'developable' area of the site from 8.76ha to 5.85ha.
- The proposed NAR has the potential to provide good vehicular access to the site, however, a form of buffer would be required between this highway and the railway to help screen them from the development.
- An unmarked footpath runs across the site, via a small bridge over Boverton Brook (which would need replacement).

- The Boverton and Llanmaes Brooks that cross the site are attractive features, with their associated habitat.
- There is a bus service that runs along Eglwys Brewis Road past the site.
- There is a group of mature trees and associated important hedgerow which, along with other vegetation features, should be retained where possible.

14.3.2.4 Design Framework and Principles

Following directly from the above assessment of the site's constraints and opportunities, a framework has been prepared that sets the vision and describes the design principles for the development of the site. These include:

- A vehicular access into the site provided via a junction on the proposed NAR.
- A pedestrian and cycle route that links the development to Eglwys Brewis Road and the nearby bus stops, and this would include a new bridge over Boverton Brook.
- Setting the development away from the Llanmaes and Boverton Brooks to allow habitats in these areas to be retained and enhanced.
- Incorporate existing landscape features, including trees and hedgerows, into the development where appropriate.
- Create a 10m wide landscape buffer zone along the west and north boundaries to screen the development from the adjacent NAR, with the existing trees to the railway retained.
- Create a 'village' character and quality that reflects existing settlements within the Vale of Glamorgan. In particular, use roads of varying width that meander through the site, with focal spaces being created at key junctions.
- Give careful consideration to the way development relates to the retained grassland areas and brooks; ensuring that the housing is set back from, but overlooks the Llanmaes Brook.
- Locate focal buildings at the end of long vistas, which contribute to longer views and overall appearance.
- Enclose key spaces, junctions and key points of entry into the site with focal buildings and continuous building frontages.
- Provide a number of areas for children's play with a local equipped area for play (LEAP) near the junction of the Llanmaes and Boverton Brooks, with further informal recreation space being associated with the Boverton Brook and on the eastern side of the Llanmaes Brook. The housing areas should

be designed to overlook these areas where possible, to encourage natural surveillance.

- Provide strong pedestrian permeability through the site by the creation of designated walkways and the connection to existing footpaths to the north and south.
- Consider the development's relationship with the adjacent landscape and its appearance in distant views.
- Divert the 33 kV overhead power lines to ensure an appropriate distance to residential development.
- Site surface water attenuation ponds to the south of the new housing.
- Strengthen scrub planting along Boverton and Llanmaes Brooks for protected species mitigation.

14.3.2.5 Landscape Impact

Whilst the development is in outline, the application contains sufficient detail in respect of the general scale of dwellings, such that an assessment of the wider landscape impact can nevertheless be made.

In this case, the SFA Design and Access Statement advises that the dwellings will be mostly two storeys in height, with a number of larger two and a half and three storey buildings sited at focal points and key locations. Accordingly, an assessment can be made with regard to buildings of that general scale and form.

As noted above, the site lies directly to the east of the B4265, but is separated from the road by dense landscaping along this highway verge. As a result, the existing site is screened from view when travelling along the B4265 in both directions and the partial retention of these trees and supplementation with new landscaping would screen the dwellings when constructed.

The site also lies adjacent to the proposed NAR, which would join the B4265 approximately 450m south east of the junction with the Llanmaes Road. Consequently, the existing landscape belt will be opened up around the point of access onto the B4265, which would in turn render the site more visible from points along the highway than it is at present. However, subject to an appropriate scheme of landscaping around the junction, it is not considered that this would in principle unacceptably impact upon the wider landscape.

The residential development would be most prominently visible from the south along Eglwys Brewis Road and from Church Meadow (further to the south), which provides elevated views across the lower section of the Tremains Farm site. From the north and west of the site, footpaths to the east and south east of Llanmaes would provide views of the rooflines of the dwellings, however, in the context of larger structures, it is considered that these would not appear as overly dominant in the landscape. The site would also be visible from parts of Llanmaes, given that the village is not generally screened by mature trees, with similar views as those appreciable from the immediate network of footpaths. However, these would be

filtered by hedgerow landscaping along the northern boundary of the NAR, and the belt of woodland proposed between the NAR and SFA site.

The development would also be partially visible from the existing West Camp, however, these views would be at greater distances and across adjoining residential areas and fields.

Consequently, and notwithstanding the proposed landscaping, the development would nevertheless have the effect of fundamentally altering the character of the land from these view points, from green fields to a semi-urban environment. However, as discussed earlier in the report, this site has been identified within the applicant's sequential site selection tests as one of the four most appropriate sites to accommodate the essential residential developments, notwithstanding the greenfield location.

Whilst the site is presently green fields and lies outside of any settlement boundary defined under Policy HOUS 2 of the UDP, it does lie in close proximity to the settlements of Llantwit Major and Eglwys Brewis and is bounded directly by the B4265 and Eglwys Brewis Road. Accordingly, it is considered that it effectively appears as an urban fringe location as opposed to lying within a wholly rural context. This is particularly the case given the proposed NAR.

In this regard the NAR would, form the northern boundary to the site and would effectively create a physical and defensible barrier to enclose the upper limit of the SFA development. It would also enclose the site around three sides along with the B4265, Eglwys Brewis Road and the railway line, and would ensure that in time, the new dwellings would not appear as an incursion into the more open surrounding countryside further north.

A new landscaped belt is proposed around the perimeter of the site and along the northern edge of the NAR (in addition to areas of landscaping to be retained) and the illustrative layout contains areas of public open space and drainage attenuation towards the southern section adjacent to Eglwys Brewis Road. It is considered that the provision of this green buffer around the site's perimeter would, subject to an appropriate density and layout throughout the remainder of the site, serve to further soften its visual impact within the landscape, break up longer range views of the site and integrate it within the wider context and character of the adjacent residential areas beyond.

Having concluded above that the principle of siting SFA in the countryside is acceptable, it is considered that the development, while irrevocably changing the character of the existing landscape, would nevertheless through careful design, assimilate into the surroundings such that it would not unacceptably impact upon the character of the wider area in principle and, subject to an appropriate scheme of landscaping (retention and new), its visual impact would be largely mitigated.

14.3.2.6 Impact on Residential Amenity

Whilst the specific impacts relating to the NAR are assessed elsewhere in the report, it is intrinsically linked to the SFA, and accordingly, it is considered appropriate to provide an assessment of residential amenity here as it relates to the SFA and the associated use of the NAR.

Furthermore given the relative proximity to each other of the sites at Tremains Farm, North of West Camp and Picketston South West and the fact that they are all accessed from the NAR, it is also considered appropriate to consider these together, and the Golf Course/Stadium site separately.

The Tremains Farm site would be separated from the housing in Llantwit Major to the west by two strips of dense landscaping and the B4265. Accordingly, it is considered that the development would have little impact on these dwellings.

The nearest existing residential property to the site is The Parwg, located on the north side of Eglwys Brewis Road, approximately 230m in from its junction with the B4265. The lower end of the SFA site lies adjacent to the rear of this dwelling's curtilage, however, an area of woodland planting is proposed along this boundary and the drainage attenuation and open space areas would lie directly beyond. Accordingly, based upon this illustrative layout, there would remain a substantial buffer between the Parwg and the proposed dwellings, which would be sited in excess of 100m away. Whilst it is acknowledged therefore that the development would alter the wider setting around this property, it is not considered that the impact of the new dwellings or the use of the land to the rear as open space would significantly impact upon the residential amenities of the occupiers.

The dwellings to the south of Eglwys Brewis Road would also lie some distance away from the proposed SFA, and it is considered that the residential amenities of these occupiers would also not be directly affected by the development. These dwellings already lie in a suburban context with existing street lighting and regular traffic movements. It is, therefore, considered that the proposal would not have a significant additional impact in terms of light or noise pollution.

The existing dwellings that would lie closest to the NAR and remaining SFA sites are those at Millands Caravan Park, Millands Farm, Old Froglands, Froglands Farm, Splott House, Rose Cottage and Oaklands. These dwellings currently lie in a rural environment to the north of the line of the proposed NAR, away from the network of major roads to the south west and the general background noise levels associated with larger settlements.

As noted above, the development would inevitably bring about a fundamental change in the character of the land, and would markedly alter the wider context and setting within which these neighbouring dwellings sit. The NAR and SFA dwellings would be clearly visible to the residents of the above listed properties and the development would result in a much higher level of traffic in their vicinity than at present, and in closer proximity. It is also considered likely that there would be an increased level of light pollution along the NAR and around the three SFA sites, which would also affect the outlook from these neighbouring properties and general character of the area.

However, whilst the resultant character of the land would clearly differ from the existing, it is not considered that the principle of a change in the nature of the living environment currently experienced by existing residents renders the development unacceptable.

Whilst residents may not benefit from the same degree of quiet and open surroundings as is typically associated with a rural area, it is not considered that the development would directly affect their living conditions to an unacceptable degree. The buildings would not have a close physical presence to these properties, nor would they materially affect their levels of privacy, and it is considered that the degree of noise and light would not exceed what may be reasonably expected in normal residential areas.

For these reasons, it is considered that the proposed SFA sites adjacent to the NAR would, whilst changing the character of the wider living environment experienced by neighbours, not unacceptably impact upon their residential amenities. In those terms, therefore, it is considered that the development satisfies the criteria of Policy ENV 27 of the Unitary Development Plan, and the Council's Supplementary Planning Guidance on Amenity Standards.

Issues relating to the amenities of residents within the development will be considered at the reserved matters stage.

14.3.2.7 Illustrative Layout

Whilst the development is in outline, a substantial level of detail has been submitted, including an illustrative layout of the development, which shows a provision of 169 dwelling units, a detailed layout of house type and location, the highway and pedestrian network, the location of areas of open space, the vehicular access point from the NAR, and landscaping.

While, the layout is only indicative and, therefore, it does not enable a full and detailed assessment of every aspect of the residential development, a general appraisal of this layout is nevertheless considered appropriate, particularly in as far as it may inform future full/reserved matters applications, should the outline be considered acceptable.

The layout effectively splits the site into 7 development zones within a network of vehicular and pedestrian routes. These zones are concentrated away from the south east end of the site, which contains the formalised areas of open space and, for topographical reasons, an area of drainage attenuation (see separate drainage section).



Figure 9: Illustrative Layout Plan: Tremains Farm

14.3.2.8 External connectivity

Manual for Streets emphasises the importance of connecting layouts to their surroundings, to encourage pedestrianism and reduce journey distances. The Tremains Farm site already benefits from a pedestrian access point onto Eglwys Brewis Road, which the layout appropriately seeks to retain, and a second pedestrian point is proposed into the land to the east. The only other formal access point to the site, that being the main vehicular entrance off the NAR, is located centrally along the northern frontage. Direct connectivity across to Llantwit Major from the western part of the site would not be easily achieved due to the steep embankments and landscaping either side of the B4265, however, pedestrian connectivity will be improved across the B4265 around the entrance to the NAR by upgrading the existing steps through to Monmouth Way. This is considered further under sustainable transport provisions at section 15.2.

14.3.2.9 Internal Permeability

The road and pedestrian/cycle network permeate through the site with a perimeter ring road and a series of internal routes that interlink different parts of the site. It is considered that this layout demonstrates a high degree of permeability that would enable an ease of movement throughout the site which is conducive to walking and cycling and would assist the external connectivity to adjoining sites. It also avoids the creation of cul-de-sacs and dead ends, in favour of a well connected network that should encourage sustainable patterns of movement.

14.3.2.10 Roads

The road network reflects one of the core design principles in that it meanders through the site with varying carriageway widths, to give irregularity and informality. It is considered that this would also assist in creating a traditional village character, as opposed to a more typically uniform and engineered suburban layout, which would fail to respect the context of the site.

The illustrative plans also indicate a change in surface materials and more 'organic' highway form in areas to clearly define the hierarchy of streets and differentiate between the principal access road, secondary lanes and homezones. This form of layout should also assist speed reduction and natural traffic calming.

Factors such as variation in road edge/property boundaries, changes in materials to demarcate the highway and pedestrian footway are welcomed but would be considered within subsequent detail applications.

14.3.2.11 Buildings

The illustrative plans contain no dwelling elevations and, therefore, whilst this level of detail would inevitably be key to the overall success of the development, the design of the dwellings, the materials and the vernacular cannot be considered at this stage. However, in terms of the general layout, the buildings would be sited close to the road around junctions and key spaces, to enclose and reinforce the street scene, with the larger 4 bed units in these locations.

Throughout the site there is a strong inward looking aspect, with most dwellings fronting the highway. However, the dwellings around the perimeter, whilst fronting the inner circulation route, turn their back on the Northern Access Road and part of the open space at the southern end. A new landscaping belt is proposed around the perimeter of the site and, subject to the nature of this landscaping and any changes in levels between the site and NAR, the orientation of the dwellings may not be appreciable. However, this is, in any case, a matter that would be fully considered at the detail application stage.

14.3.2.12 Open Space

The open space is to be contained in the south east corner, adjacent to the pedestrian link through to Eglwys Brewis Road. The illustrative layout generally overlooks and provides surveillance to the formalised play area, however, its siting in this corner is not ideal for accessibility to the units in the northern part of the development. However, these matters remain principally for consideration as part of a detailed application.

A policy based assessment of the amount of open space to be provided, both site specific for all 4 SFA areas and aggregated, is contained within the general principles section.

14.3.2.13 Vehicular Access, Highway Safety Issues and Parking

As noted above, there is one vehicular access point into the site, which is proposed relatively centrally along the sites frontage with the NAR. The access has been designed in consultation with the Council's Highways Engineers and is considerable acceptable in highway safety terms, with vehicles entering and egressing from the site benefiting from good visibility in both directions along the carriageway. The Head of Visible Services (Highway Development) has advised in this respect that the design of the NAR complies with national guidance and highway standards, and that junction spacing along the NAR is acceptable.

Since the overall layout within the site is only illustrative, it is not considered necessary to assess the highway geometry in detail now, however, at any future full/reserved matters application stage, full engineering drawings, dimensions, levels and drainage details would be required.

Whilst some internal road layout modifications may subsequently be required as a result of this detailed highway analysis, the Council's Highways Engineers have not raised any in principle objections to a layout of the general form proposed, which is considered to have sufficient regard to the principles of manual for streets.

Finally, each dwelling would be served by its own provision of off street parking, the overall layout and provision of which would be considered at the detail application stage.

14.3.2.14 Landscaping and Ecology

The landscape strategy for this site seeks to retain existing mature vegetation, hedgerows and semi-improved grassland, including one 'important hedgerow' as defined under the Hedgerow Regulations 1997.

Although an area of broadleaves woodland would be lost adjacent to the railway line, it is considered that this would be compensated for by the substantial additional planting that is proposed.

Additional planting is proposed throughout the site and around the perimeter, with an aim to creating a 'well vegetated' character, typical of traditional villages within the Vale of Glamorgan.

It is considered that the above represents an acceptable strategy in principle and that its effectiveness can be controlled and ensured by the detail composition of the landscaping scheme that would be required with any subsequent reserved matters/full application, or by condition.

In terms of biodiversity enhancement/maintenance, the design seeks to retain mature vegetation features such as a group of mature trees at the north east of the development, which are identified as of value to bats. The group of trees will connect via landscape planting to the edge of the housing development and roadside planting of the Northern Access Road. These trees are also considered to be of value to birds and invertebrates.

Mitigation measures and/or further survey work is recommended in respect of bats, otters, badgers, dormice and reptiles, however, no in principle objection is raised to the development in respect of impact on these species.

14.3.2.15 Drainage and Flooding Issues

The drainage and flood risk issues arising from the SFA developments are assessed in more detail later in this report in the Hydrology section, however, in summary, The Environment Agency Wales (EAW) have raised no objection to the development in respect of the Tremains Farm SFA, which would contain a drainage attenuation area towards the south eastern point of the site

However, the EAW have advised that surface water drainage from the site must not increase the flow within Boverton Brook, which has previously been the source of flooding in Boverton. A Greenfield run-off restriction would also apply to surface water discharges into the Nant-y-Stepsau, which is designated as a main river, and would include any surface water discharges into storm water sewers that ultimately drain into a watercourse.

A number of conditions are requested by the EAW that would require specific detail of measures to prevent flooding and pollution to be submitted and agreed, including the provision of a surface water regulation system that would demonstrate Greenfield run off rates post development.

Finally, it is noted that proposals for diverting parts of the upper reaches of the Boverton Brook to provide betterment in respect of flood risk, will need to be the subject of further discussions, and can be required if necessary by condition at the reserved matters stage.

Having regard to the above, it is considered that the proposed development would, subject to the approval of surface water regulation systems, not increase flood risk in the area of the site and around the Boverton Brook, in accordance with the requirements of Policy ENV 7 of the Vale of Glamorgan Adopted Unitary Development Plan.

14.3.3 North of West Camp

14.3.3.1 Site Description and Context

The site is located to the north of Eglwys Brewis Road and the West Camp area of MoD St Athan, 0.9 miles (1.4 km) from the DTC main gate. The site is 3.82 hectares (9.4 acres) in total and presently comprises existing agricultural land (130m wide x 100m deep). Existing hedgerows run along Boverton Brook at the southern site boundary and the northern boundary of the site would be formed by the proposed NAR. There is no existing physical boundary on the ground to delineate the eastern boundary of the site, and the western boundary is broadly along an existing field boundary with Froglands Farm.



Figure 10: Site Location Plan: North West Camp

The site, therefore, lies adjacent to an existing farm building to the south-west, further pasture land to the north and west and Eglwys Brewis Road to the south, along which there is an existing bus stop. There are a number of community facilities in the vicinity along the highway, including a listed church and the Carpenters Arms public house, which lies directly opposite the south east corner of the site.

West Camp itself lies further south with existing residential properties positioned to the south-west. Two public rights of way run from Eglwys Brewis Road, over Boverton Brook and across the site to the north and west. The existing access point to the site is via a pedestrian footbridge over Boverton Brook on the southern boundary.

No buildings exist within the site, and the surrounding area comprises a mix of farm buildings and residential properties. Froglands Farm and its associated buildings lie directly to the west of the site, which forms part of a small cluster of residential and farm buildings clustered around the lane leading from Eglwys Brewis Road to Llanmaes. To the south west of the site on the opposite side of Eglwys Brewis Road lies former service families' accommodation, comprising rows and pairs of modestly scaled two-storey dwellings.

14.3.3.2 Topography

The site is relatively flat with a high point of 43m AOD to the north and a low point of 40m AOD to the south. This 3m level change occurs over a distance of some 130m, which is considered to be a gentle slope. To the south there is an existing stream, Boverton Brook, which runs parallel to the southern boundary and is identified within the applicants Design and Access Statement as an area of potential flood risk

14.3.3.3 Site Development Considerations

In order to respond to the above context and its physical and natural characteristics, the submitted Design and Access Statement lists the following as the key constraints and opportunities in respect of this site's development:

(Given the relative similarities between this site and Tremains Farm, due to their proximity and shared context, the site development considerations are similar:

- The Boverton Brook, which runs along the southern boundary of the site, is an attractive feature, which can contribute to visual amenity.
- A small part of the site, associated with Boverton Brook, lies within a C2 flood zone, the extent of which has been defined by site specific modelling carried out by Entec. Development must therefore be directed away from this area to ensure that the flood risk to the new development is low. Minimum finished floor levels have been recommended.
- Although the overall site has an area of 3.82 hectares, the extent of the C2 flood zone and the provision of a buffer to the NAR, mean that the developable part of the site is reduced to 3.02 hectares.
- Two sections of maintained hedgerows partially extend into the site, with one being an important hedgerow.
- There is a medium sized Horse Chestnut tree, which may be worthy of retention. The other trees are proposed to be removed.
- Two public footpaths cross the site.
- The existing footbridge over Boverton Brook will need to be replaced.
- The NAR has the potential to provide good vehicular access to the site, however, some form of buffer will be required to the NAR to help screen it from the development.
- An 11 kV overhead cable crosses the southern corner of the site.
- A bus service runs along Eglwys Brewis Road, close to the southern boundary of the site.

14.3.3.4 Design Framework and Principles.

Having regard to the above assessment of the site's constraints and opportunities, a framework has been prepared that sets the vision and describes the design principles for the development of the site. Given the similarities between this site and Tremains Farm, the framework is also broadly similar and includes:

- Providing a vehicular access into the site is provided via a junction on the proposed NAR.

- Providing a pedestrian and cycle route between the development and Eglwys Brewis Road, to include a new bridge over Boverton Brook and a short length of footpath along part of the northern verge to provide a path to the existing bus stops.
- Maintain public rights of way will be across the site, although a diversion of the routes may be required.
- Provide two further pedestrian/ cycle links are onto the NAR in addition to the main vehicular access into the site, one to the west which links up with the public right of way and one to the east, which allows easy access to the proposed community facilities and sports pitches within the DTC site.
- Set the development away from Boverton Brook, allowing habitats in this area to be retained.
- Retain the small sections of existing hedgerow, with the important hedgerow being incorporated as an entrance feature.
- Create a 10m wide landscape buffer zone along the northern boundary to screen the development from the adjacent NAR.
- Design the layout of roads, lanes and housing to create a 'village' character and quality that reflects existing settlements within the Vale of Glamorgan. In particular, use roads of varying width that meander through the site, with focal spaces being created at key junctions.
- Provide three areas of open space; one in the east, one in the south and one in the west.
- Ensure strong pedestrian permeability through the site through a network of lanes within the site, to connect to existing and proposed footpaths outside the site.
- Define clear development blocks showing public and private spaces with buildings fronting roads to ensure high levels of natural surveillance.

14.3.3.5 Landscape Impact

The site lies outside of any settlement defined by Policy HOUS 2 of the Vale of Glamorgan Adopted Unitary Development Plan and is, therefore, considered as countryside. Like Tremains Farm, it is essentially Greenfield in nature and presently forms part of the generally rural setting around West camp, albeit north of Eglwys Brewis Road.

As noted above, the principal road that bounds the site is Eglwys Brewis Road to the South, separated from the land in question by the highway verge and mature hedgerows and trees. Accordingly, the land itself is not readily visible from the highway, however, the rural nature of the land beyond is nevertheless appreciable.

The south east corner of the site lies adjacent to a lay-by/overflow car park for the Carpenters Arms and consequently, the hedgerows and landscaping around this point are set back some 10m from the highway edge. Whilst providing reasonable screening to the land beyond, this strip is also sparser than the thicker hedge/tree cover further that adjoins the site to the east. As a result, it is likely that the eastern end of the SFA development will be partially visible when travelling westerly along this part of Eglwys Brewis Road, however, the existing vegetation is to be retained and this could potentially be supplemented if considered necessary.

Further along Eglwys Brewis Road to the West the trees/hedges are markedly thicker and lie directly adjacent to the road. As a result, and given that the plans indicate the retention of these features, it is considered that the proposed dwellings would be almost wholly screened from view along the majority of the southern boundary of the site.

There is a public highway some 130m to the north of the site, however, the proposed SFA site at 'Picketston South West' and the NAR would lie between that right of way and the 'North of West Camp' site. Accordingly, the impact of this site from those locations would be less readily appreciable in itself, given the closer proximity of this site to the north (see following section for detailed analysis of landscape impact in that respect).

There are public footpaths further to the north west of the site, which would provide less interrupted views of the development, however, these views would be against a backdrop of the existing West Camp dwellings and larger DTC buildings to the south, which currently form the horizon. Notwithstanding this, it is accepted that, whilst views of housing and military structures are not necessarily uncharacteristic features within wider the wider landscape, the new development would be at closer range, thereby detracting to a degree from the rural character of these views.

However, similarly to views of Tremains Farm from the north, the NAR would enclose the upper limit of the site and would effectively create a physical and defensible boundary around the SFA development. This siting of the NAR (and proposed SFA to the north) would also ensure that the development, where visible, would not appear as an arbitrary incursion into the wider countryside further north.

Notwithstanding the above, a new landscaped belt is also proposed around the northern boundary of this site adjacent to the NAR, which would provide a buffer to partially screen the development from wider views. Whilst this may screen the development to a more limited degree initially, it would serve as a more effective measure as it matures.

In conclusion, taking together the existing and proposed landscaping and considering the wider contextual relationship between the site, the proposed NAR and its surroundings, it is considered that the development would not appear as an unacceptable incursion into the countryside and that its visual impact within the wider landscape would be sufficiently mitigated, from many public viewpoints. From locations where the site would be more visible to the north and east, the development would clearly have the effect of changing the character of the land, however, it is considered that subject to careful design and appropriate landscaping, it would also assimilate into its surroundings such that it would not unacceptably affect the character of the wider countryside.

Accordingly, and given the special strategic justification for siting the SFA in this Greenfield location, it is considered that this element of the proposed SFA is acceptable in principle.

14.3.3.6 Illustrative Layout

The illustrative layout provides for 59 units, mainly detached with some semi-detached and generally of two storeys. Similarly to Tremains Farm, it also involves a smaller number of two and a half and three storey dwellings around key locations and junctions.

The layout effectively splits the site into 4 development zones within a network of vehicular and pedestrian routes. These zones are concentrated away from the south east and south west points of the site which, similarly to Tremains Farm, are at risk of flooding and have been considered for formalised open space.

14.3.3.7 External connectivity

The main vehicular access point is proposed broadly centrally along the frontage with the NAR, along with pedestrian footways either side, and two further pedestrian access points are proposed at each end of the site.

To the south of the site, the layout seeks to maintain the existing pedestrian link that exits onto Eglwys Brewis Road. This right of way currently involves a bridge over the brook and it is considered necessary to upgrade/replace this bridge, to ensure an adequate and useable means of access is maintained. This link to the south provides direct access to the vicinity of the Carpenters Arms pub, bus links along Eglwys Brewis Road and existing residential developments in West Camp.



Figure 11: Site Location Plan: North West Camp

The western boundary of the site lies adjacent to Froglands Farm and the eastern boundary adjoins a grassed area (subject to flooding). Links through to these areas of land are, therefore not appropriate.

It is, therefore, considered that the illustrative layout demonstrates an effective degree of connectivity to the surrounding road network, and would assist pedestrian movement and use of existing services and infrastructure.

14.3.3.8 Internal Permeability

The site is much smaller than Tremains Farm and, therefore, involves a simpler internal layout broadly consisting of a single ring road with the inner zones of housing divided in two. It is considered that the layout also demonstrates a high degree of permeability and would assist an ease of movement through the site for all residents to access Eglwys Brewis Road and the NAR.

14.3.3.9 Roads

The road network again reflects the core design principles set out in the Design and Access statement, in that it meanders through the site with varying carriageway widths, to give irregularity and informality. Along with the home zones created in the central areas of housing, it is considered that this would help to achieve the more organic village feel that the applicant is seeking.

The desired hierarchy of streets, natural speed calming and varied road edge/property boundary treatment are matter for future detailed applications, however, it is considered that the general illustrative layout would easily facilitate the implementation of the design code.

14.3.3.10 Buildings

As noted above, the illustrative plans contain no dwelling elevations and, therefore, issues relating to specific design, vernacular and the rhythm of the buildings cannot be considered now.

However, in terms of general layout, the inner zones and northern strip would provide an appropriate aspect orientated towards the highway and the larger units appear to be located around junctions and key spaces to create focal points.

The inner zones are more informal in their layout and would potentially achieve a village character, however, the northern strip adjacent to the NAR is more suburban, with uniform pairs of semi-detached dwellings along across the whole width of the site. this section also turns its back on the NAR and in that respect, may be regarded as contrary to the guidance in Manual for Streets. However, this does not affect the acceptability of the development in principle, and would be a matter for further consideration as part of a detailed application.

14.3.3.11 Open Space

The open space is to be contained mainly in the south east and south west corners of the site (two Local Areas for Play), with a further smaller section in the north west corner, in positions that would benefit from excellent natural surveillance from dwellings across the street. The open space is also sited along what would be the main route for many residents through to Eglwys Brewis Road, therefore providing further surveillance.

Furthermore, the open space appears easily accessible to residents throughout the site, particularly given that it is split into two smaller distinct areas.

The policy based assessment of the amount of open space to be provided, relative to the number of users, is contained in the general principles section of this report.

14.3.3.12 Vehicular Access, Highway Safety Issues and Parking

As noted above, there is one vehicular access point into the site, which is proposed relatively centrally along the sites frontage with the NAR. The access has been designed in consultation with the Council's Highways Engineers and is considerable acceptable in highway safety terms, with vehicles entering and egressing from the site benefiting from good visibility in both directions along the carriageway. The Head of Visible Services (Highway Development) has advised in this respect that the design of the NAR complies with national guidance and highway standards, and that junction spacing along the NAR is acceptable.

Since the overall layout within the site is only illustrative, it is not considered necessary to assess the highway geometry in detail now, however, at any future full/reserved matters application stage, full engineering drawings, dimensions, levels and drainage details would be required.

Whilst some internal road layout modifications may subsequently be required as a result of this detailed highway analysis, the Council's Highways Engineers have not raised any in principle objections to a layout of the general form proposed, which is considered to have sufficient regard to the principles of manual for streets.

Finally, each dwelling would be served by its own provision of off street parking, the overall layout and provision of which would be considered at the detail application stage.

14.3.3.13 Landscaping and Ecology

Central to the landscaping strategy, the proposal seeks to retain the mature vegetation along the southern boundary which, in addition to providing screening from Eglwys Brewis Road, would have amenity value within the site.

The layout has also been designed to retain the Important Hedgerow, located to the side of the main access point off the NAR. There are no mature trees within the site that could be retained, however, a number of new trees are proposed at key junctions to create a well vegetated character throughout.

A supplementary landscaped buffer is proposed along the boundary with the Northern Access road which, subject to its composition, should effectively soften the impact of the development within the landscape.

The important hedgerows identified at the northern boundary of the proposed SFA area will remain as the boundary to this particular development. The Ecology Strategy advises that where important hedgerows are lost, it is they should be translocated to the boundary and incorporated within the landscape planting for the site.

The strategy recommends mitigation measures and/or further survey work in respect of Great Crested Newts, reptiles, otters and badgers, however, it does not identify any in principle objection to the development as a result.

In terms of biodiversity enhancement, the over-mature hedgerow and trees along the southern boundary will be retained, facilitating east west movement of species.

14.3.3.14 Drainage and Flooding Issues

The drainage and flood risk issues arising from the SFA developments as a whole are assessed in the Hydrology section of the report, however, in summary, The Environment Agency Wales (EAW) have raised no objection to the development in respect of this site, which would contain a drainage attenuation area towards the south eastern point of the site

Development has been channelled away from the areas of flood risk adjacent to the brook, with the areas of open space occupying the southern corners. Conditions will once again be appropriate, as requested by the EAW, to ensure that surface water run off does not exceed Greenfield rates.

The EAW response does not make reference to flooding issues as they pertain specifically to the North of West Camp site, however, they are satisfied that the flood modelling has demonstrated dwellings in the general zones shown would not be at an unacceptable risk of flooding, and that the development would not increase flood risk in other areas.

It is, therefore, considered that the development of this site would not in principle conflict with the aims of Policy ENV 7 of the UDP.

14.3.4 Picketston South West

14.3.4.1 Site Description and Context

The site is located off the lane running past Froglands Farm to the north-west of MoD St Athan, 0.7 mile (1.1 km) from the DTC main gate. The site is 4.88 hectares (12.1 acres) in total and measures approximately 500m wide x a maximum of 150m deep. The site is predominantly agricultural land with part used for arable cultivation, however, an area to the west is used as a touring caravan park.

The southern boundary of the site would be formed by the proposed Northern Access Road (NAR) and the north western boundary would be formed by the existing highway that runs past Froglands Farm, northwards towards St. Mary Church. The northern and eastern boundaries of the site would adjoin part of the proposed DTC, which in this area would provide sports pitches, a community centre and crèche, a hotel and sports centre.

Existing hedgerows run along the north western boundary and across the site, marking the existing field boundaries, and an existing public right of way runs through the western section. The continuous hedge along the north-western boundary has been identified as 'important' under the Hedgerow Regulations 1997 and also, a phase 1 habitat survey has identified a 'species-rich' hedgerow to the north which contains between 4 to 6 woody species. An 'important' hedgerow has also been identified to the west.

In terms of context, the site is surrounded to the north by agricultural land and would be adjoined to the east by the DTC sports pitches and to the south by the North of West Camp SFA development, which lies directly across the NAR. The curtilage of Old Froglands lies directly to the west, with further agricultural land beyond. The most directly relevant context in terms of buildings would be the neighbouring SFA development and the small complex of buildings around Froglands farm and Old Froglands.

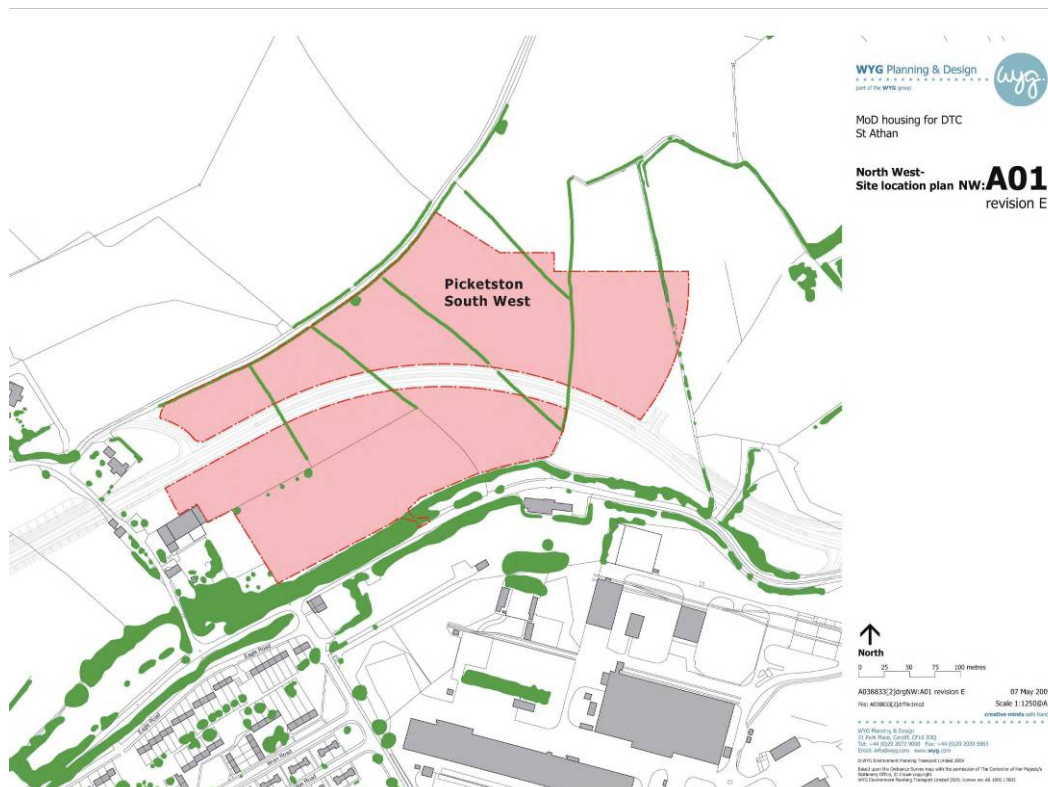


Figure 12: Site Location Plan: Picketston South West

14.3.4.2 Topography

The site is relatively flat with a 3.0m level change over a distance of some 270m. The highest point is to the north at 45m AOD and the lowest point is 42m AOD to the south. The site gently slopes away from the north-west to the south-east.

14.3.4.3 Site Development Considerations

Given the proximity of the development to the site at North of West Camp in particular, and the similar close relationship it bears to the Northern Access Road, the site's development constraints are similar in nature to those already considered in as far as they relate to the highway network. However, given the relative levels and distance of the site from the brook, the site is at less risk from flooding, and the linear form of the site is inherently more restrictive in terms of layout. Notwithstanding this, the development constraints/considerations are summarised as follows:

- Hedges, containing a diverse range of native species, sub-divide the site in a north-western, south-eastern direction creating individual fields. The hedgerow in the south-west corner is an important hedgerow, whilst a hedgerow in the north of the site is species rich.
- A public footpath crosses the site.
- A drainage ditch crosses the eastern corner of the site.

- A small part of the site, along the ditch water-course in the eastern part of the site, is affected by a C2 flood zone, the extent of which has been defined by site specific modelling carried out by Entec.
- The direct proximity to the NAR and sports pitches will necessitate some form of landscaped buffer with these neighbouring developments.
- Vehicular access to the site is required to be from the west rather than the east, to coordinate with the overall green travel plan for the DTC and ABP.
- Although the overall site has an area of 4.88 hectares, the developable part of the site is reduced to 4.15 hectares due to the Boverton Brook and the provision of a buffer to the NAR.

14.3.4.4 Design Framework and Principles

The design framework for the site largely reflects the principles contained within the central SFA Design and Access statement, in as far as it relates to matters of 'village character', core highway layout strategy, building form and focal buildings etc. These matters have already been discussed within the analysis of Tremains Farm and North of West Camp and remain applicable to this development. The following summary shall, therefore, relate only to design issues relating solely to this site, and is as follows;

- Provide vehicular access into the site directly off the lane to the north. The provision of access from this lane requires the widening of the carriageway and the resulting translocation of the southern hedgerow
- Provide pedestrian and cycle routes through to the will link the NAR and adjacent DTC facilities to the east.
- Provide links through to existing footpaths to the north and south of the site.
- Maintain the public right of way across the site, although a slight diversion of the route will be required.
- Create a 4m wide landscape buffer zone along the southern and western boundaries to screen the development from the adjacent NAR.
- Incorporate existing hedgerows where appropriate and possible.
- Provide a local equipped area for play (LEAP) and local area for play (LAP) centrally within the site, and further informal recreation space around the drainage ditch.
- Design the housing areas to overlook these spaces, to encourage natural surveillance.
- Incorporate a diverted drainage ditch on the eastern boundary of the site and set the development away from this.

14.3.4.5 Landscape Impact

This site also lies in the open countryside, outside of any settlement defined by Policy HOUS 2 of the UDP. It is also essentially Greenfield in nature, and forms part of the rural setting around the existing MoD site.

The land to the north of the site rises gently with a similar gradient as that which runs across the application site and for that reason, the development would be visible along public footpaths to the north and from longer range views in this direction.

However, the site sits between the existing highway that runs past Old Froglands and the NAR, and would in essence form a continuation of the adjacent DTC development to the east along the existing highway boundary. Whilst this neighbouring part of the DTC largely comprises sports pitches and outdoor training areas, and therefore not the density of buildings contained within the SFA, it is considered that it would nevertheless not retain the appearance of rural countryside, but would possess a more formalised character that renders it distinct from the agricultural land across the road to the west.

Accordingly, it is considered that the SFA would appear from wider views as a logical continuation of the DTC development, appropriately contained within the defensible barrier formed by the road. In addition, given that the DTC development would continue northwards along this boundary, and considering the directly adjacent 'North of West Camp' SFA, it is considered that this development would not appear an incursion into agricultural land, but would instead appear as part of the wider DTC within an existing physical boundary. In addition, the scheme seeks to provide a landscaped buffer along the northern and western boundaries of the site, and it is considered that this would serve to soften the physical impact of the development from more immediate views and those at ground levels comparable with that of the site.

In terms of wider context, from longer range viewpoints to the north west the SFA would be seen against a backdrop of the existing West Camp and, given its relationship to the NAR and DTC, it would appear as an extension of the wider MoD site, and not an isolated form of development in the countryside. However, notwithstanding this, it is accepted that the new development would be at closer range than existing buildings to the south, thereby detracting from the rural character of these views.

Having concluded that the principle of siting SFA in the countryside is acceptable, it is considered that the development, while irrevocably changing the character of the existing landscape, would nevertheless through careful design, assimilate into the surroundings such that it would not unacceptably impact upon the character of the wider area in principle and, subject to an appropriate scheme of landscaping (retention and new), its visual impact would be largely mitigated. Coupled with the overriding sustainability justification for locating the SFA as a whole near to the whole DTC site, it is considered that the proposed development is acceptable in principle in this location.

14.3.4.6 Illustrative Layout.

The illustrative layout provides for 83 units, largely in the form of semi-detached, with a number of detached properties spread throughout the site. Once again, the dwellings are to be between two and three storeys in height.

The layout effectively splits the site into 6 development zones, within the network of vehicular and pedestrian routes. These zones occupy a larger proportion of the overall site than Tremains Farm and North of West Camp since no part of this site lies within Flood Zone C2.



Figure 13: Illustrative Layout Plan: Picketston South West

14.3.4.7 External Connectivity

The site would benefit from two separate access points onto the main highway to the north, one centrally along the frontage and one in the north west corner, and this would assist residents in the peripheral parts of the site to access/leave the site more easily.

Pedestrian links are also proposed through to the NAR to the south and to the adjoining DTC development to the east, adjacent to the sports pitches. Links to the agricultural land to the north or the residential property to the west would not be appropriate since these areas of land have no public use.

It may be possible to provide a further pedestrian link through to the NAR in the south western part of the site, which would further assist the connectivity with the SFA site opposite.

However, in the main, it is considered that the illustrative layout demonstrates a reasonable degree of connectivity to the surrounding road network and DTC development, and would assist effective pedestrian movement.

14.3.4.8 Internal Permeability

The site is relatively linear in form and this to a large degree, dictates the internal layout. However, in the larger eastern section of the site, the layout is split into two main zones with a ring road separating them from the perimeter rows of dwellings. This section contains a lane that provides a central access point through the zones of dwellings, assisting pedestrian movement through the site.

It is considered that the natural linear shape of the site does not easily facilitate movement throughout all parts, however, the general layout demonstrates good internal links as far as is possible,

14.3.4.9 Roads

The road network reflects the core design principles set out in the Design and Access statement, in that it meanders through the site with varying carriageway widths, to give informality. Along with the home zones created in the eastern areas of housing, it is considered that this would help to achieve an irregular village character.

The effectiveness of the proposed hierarchy of streets, natural speed calming and varied road edge/property boundary treatment would be determined by subsequent detailed submissions, however, it is considered that the general illustrative layout would easily facilitate the implementation of these design principles.

14.3.4.10 Buildings

As noted above, the illustrative plans contain no dwelling elevations and, therefore, issues relating to specific design, vernacular and the rhythm of the buildings cannot be considered now.

However, in terms of general layout, the inner zones and western linear section would provide an appropriate inward aspect towards the highway and the larger units appear to be located around junctions and key spaces to create focal points.

However, the dwellings along the southern and northern boundaries would turn their backs on the respective highways. This may result in a failure to display an engaging outward frontage along the site's most prominent boundaries, however, the landscaped buffer would be likely to soften this impact. It is considered that this issue requires attention, should the development as a whole be considered acceptable in outline, but does not represent an in principle objection at this stage.

14.3.4.11 Open Space

The main formalised areas of open space are proposed centrally within the site, which is considered to represent the ideal location. Not only would they benefit from excellent natural surveillance, but they would lie in the most accessible location for all residents.

The layout also indicates secondary areas of amenity space around the perimeter, and in the form of a triangular piece of land between the two main housing zones in the western portion of the site. It is considered that these would also serve as an effective supplement to the main areas already identified.

The policy based assessment of the amount of open space to be provided, relative to the number of users, is contained later in this report.

14.3.4.12 Vehicular Access, Highway Safety Issues and Parking

As noted above, there is one vehicular access point into the site, which is proposed relatively centrally along the site's frontage with the NAR. The access has been designed in consultation with the Council's Highways Engineers and is considered acceptable in highway safety terms, with vehicles entering and egressing from the site benefiting from good visibility in both directions along the carriageway. The Head of Visible Services (Highway Development) has advised in this respect that the design of the NAR complies with national guidance and highway standards, and that junction spacing along the NAR is acceptable.

Since the overall layout within the site is only illustrative, it is not considered necessary to assess the highway geometry in detail now, however, at any future full/reserved matters application stage, full engineering drawings, dimensions, levels and drainage details would be required.

Whilst some internal road layout modifications may subsequently be required as a result of this detailed highway analysis, the Council's Highways Engineers have not raised any in principle objections to a layout of the general form proposed, which is considered to have sufficient regard to the principles of manual for streets.

Finally, each dwelling would be served by its own provision of off street parking, the overall layout and provision of which would be considered at the detail application stage.

14.3.4.13 Landscaping and Ecology

The landscaping strategy centres around retaining existing hedgerows and supplementing them with further landscaped buffers around the areas adjoining the highways to the north and south.

In addition, the proposed formal and incidental areas of open space throughout the site should provide a green aspect that would assist the integration of the site into the surrounding rural context and soften its impact from wider views.

The Ecology Strategy advises Existing vegetation features such as hedgerows have been appropriately incorporated into the development at Picketston South West, providing conduits through and around the site for a variety of invertebrates, small mammals and reptiles.

Four trees within the site have moderate to high value in terms of supporting bat roosts, however, since no trees are to be lost as a result of the development, no specific mitigation measures are proposed.

14.3.4.14 Drainage and Flooding Issues

The drainage and flood risk issues arising from the SFA developments as a whole are assessed in the Hydrology section of the report, however, in summary, The Environment Agency Wales (EAW) have raised no objection to the development in respect of this site, which would contain a drainage attenuation area towards the south eastern point of the site

No part of this site lies within Flood Zone C2 and, therefore, the occupiers of the SFA should not be at an unacceptable flood risk. However, the site would nevertheless still be subject to a surface water regulation system, to ensure that run off rates do not pose an unacceptable flood risk on adjoining land nearer to Boverton Brook.

It is, therefore, considered that the development of this site would not in principle conflict with the aims of Policy ENV 7 of the UDP.

14.3.5 Stadium/Golf Course.

14.3.5.1 Site Description and Context

The site is located off Flemingston Road to the east of MoD St Athan, but within the RAF St. Athan boundary defined by Policy EMP 10 of the UDP, and lies 0.7 mile (1.1 km) from the proposed DTC main gate. It is 8.02 hectares (19.8 acres) in area and comprises a former athletics stadium and part of the St Athan Golf Club course. The site measures approximately 230m wide x 330m deep and lies directly to the south and east of existing MoD housing. It's width aligns with the eastern extent of Burley Place directly to the north and its depth extends down to the southern boundary of the existing Mod homes. To the east, the site faces open countryside and to the south, it adjoins the existing golf course, and the area of its proposed extension.

Existing hedgerows run along the northern, eastern and the majority of the western boundary, with the north eastern section of the site lying within a special landscape area, designated under Policy ENV 4 of the Unitary Development Plan.

The existing main access point into the site lies at the north west corner, directly off Flemingston Road and 20m east of the nearest access point into the former MoD housing to the west. There is a secondary pedestrian opening along the western boundary, however, this is gated and locked and does not appear to have been used for a significant length of time.



Figure 14: Site Location Plan: Stadium / Golf Course

The athletics stadium has been demolished, but the foundations remain and site remediation would therefore be required. Two and a half of the nine holes of St Athan Golf Club also lie within the boundary of this site, with a further hole being affected because of proximity to the site.

The surrounding townscape is a mix of quality fabric and tenure. To the north of the site along Burley Road lies a mix of large, semi-detached, former military officer homes with garages. Adjacent to these, further west, are large, detached former senior officer accommodation. To the west of the site lies a large housing estate that predominantly comprises terrace housing. The layout demonstrates a series of dead ends with a number of units fronting onto the site along the western boundary. It is considered important that the framework for the site has regard to the adjacent area.

14.3.5.2 Topography

The site slopes gently from a high point of 52m AOD at the northern boundary to a low point of 45m at the south-east corner. This level change of 7m occurs over a distance of just over 550m, creating the impression that the site is flat; this is illustrated by the sections of the existing site. In the north-west corner of the site the alignment of the contours suggests that the land was regraded during the construction of the stadium and running track, which has since been demolished. In this location a level change of approximately 1m occurs along the length of the former stadium, a distance of some 170m.

14.3.5.3 Site Development Considerations

The Golf Course site is markedly different from the other three SFA sites in terms of its location relative to the proposed DTC, its immediate context and surroundings, and the nature of the existing/former use of the land. Whereas the other three sites are located off the proposed NAR in essentially Greenfield locations, this site is located close to large areas of existing MoD housing, on essentially a Brownfield site. Accordingly, the site specific and contextual considerations are quite different. The main issues are considered to be:

- The southern boundary constraint, which has been determined by aeronautical issues relating to the licensing of the St Athan runway.
- The pill box that lies close to the western boundary, which should be retained.
- The hedgerows that form part of the boundary, which are agricultural field boundary hedgerows consisting of a mixed native species, with some parts being considered important under the hedgerow regulations 1994.
- The amenity value of existing trees, and whether they are worthy of retention.
- The relationship between new housing and the existing houses on Scott Close and Drake Close, along the western site boundary, which need careful consideration.
- The re-design of the existing golf course, to account for the holes lost by the development.
- The preservation of the main vehicular access to the site is confined to Flemingston Road.
- Consideration of the relationship between the site and the Lower Thaw Valley Special landscape Area, within which part of the site lies.

14.3.5.4 Design Framework and Principles

Given the context of the site and its relationship to the existing MoD housing and adjoining countryside, the applicant has identified the following in the SFA Design and Access Statement as being the key design principles for this specific development:

(note: general design principles consistent to all four sites are not included but remain applicable to this development)

- Access from a new roundabout junction on Flemingston Road.
- Open space along the western boundary, where it would be overlooked by the existing housing on Scott Close A local equipped area for play (LEAP) and local area of play (LAP) should be included within this open space,

providing the required amount of children's play provision for the development.

- Design a principal loop route through the site to provide access to all parts of the development.
- Incorporate existing landscape features, including trees and hedgerows, wherever possible.
- Ensure strong pedestrian permeability through the site by the creation of designated walkways and connection points to the existing footpath network to the north and west.
- Consider the layout of the existing housing development to the west and north of the site and integrate the proposed development within this, as an extension to the settlement.
- Create clearly defined development blocks showing public and private spaces with buildings fronting roads to ensure high levels of natural surveillance.
- Retain the existing pill box, with associated planting.
- Consider the development's relationship with the adjacent landscape (and Special Landscape Area) and its appearance in distant views.

14.3.5.5 Landscape Impact

The site lies within the boundary of land designated under Policy EMP 10 – RAF St. Athan, of the Unitary Development Plan. This Policy states that further appropriate developments in respect of RAF activity within the RAF base will be favoured provided there is no unacceptable impact on local amenity. Therefore, whilst the site does not lie within any defined residential settlement boundary and sits within a semi-rural context, it does not lie within the countryside.

The site is located on the edge of the existing residential development and is, therefore overlooked by properties where there are gaps in the western boundary vegetation. The existing vegetation along the northern boundary is more mature and, therefore, generally screens the site from view, other than around the entrance.

However, whilst the site is overgrown and vegetated in appearance from these close range viewpoints, it does not possess an overtly rural character, since it remains enclosed by mesh fencing and large steel gates at the entrance from Flemingston Road. Around this entrance, there also remain large concrete hardstandings from the former stadium use. The site has become partially assimilated into its surroundings, however, it has undoubtedly also retained its former character to a degree, and appears outwardly as a previously developed piece of land. To this extent, it is considered that it does not contribute positively to the visual amenity of the wider area.

Therefore, whilst the SFA development would clearly introduce a greater mass of buildings to the site than at present (and that which would have been associated with the former stadium use), it is considered that it would not adversely affect the character of the land or the wider area.

Distant views are available from within the site towards the countryside to the south and east and, therefore, the site will also be visible in views from these parts of the wider landscape. From these wider views, the previously developed nature of the land is less appreciable, as the degree to which it appears assimilated into the adjoining countryside would be increased.

However, from these longer range views, the land would be seen in the wider context of the existing dwellings to the north and west. Accordingly, and given that the SFA site would align with the southern and eastern boundaries of the existing built residential estates, it is considered that the proposal would appear as a natural and logical rounding off of the existing 'settlement', and not as an incursion into the rural landscape.

It is accepted that part of the land lies within the Lower Thaw Valley Special Landscape Area (SLA), however, this land currently forms part of the golf course and is physically separated from the agricultural land further east by a continuous field hedge. Accordingly, whilst it nevertheless lies in the countryside, the land does not possess the same rural landscape character as the adjoining fields and does not appear as part of the undeveloped countryside.

Having regard to the existing use and character of the land, and the degree to which the development would be seen as a logical rounding off of the existing residential areas, it is considered that the development would not unacceptably impact upon the special landscape character of the Lower Thaw Valley SLA

Notwithstanding the above, however, it is considered that an appropriate landscaping scheme around the perimeter of the site would also soften its visual impact from longer range views.

In conclusion, given that the golf course site is shown in the development brief and lies within the EMP 10 boundary, it is considered to be an acceptable location for such new development, being a large-scale rounding off the existing estate of dwellings, which would not adversely affect the character of the surrounding countryside. In addition, its use for housing has been generally accepted in representations made, objections being largely focussed on the other three 'countryside' sites.

14.3.5.6 Impact on Residential Amenity

The dwellings contained within the proposed SFA development would be sited sufficiently away from existing dwellings to the west and north to ensure that there would be no direct impact in terms of their physical presence, massing or overlooking.

There would be an altered outlook to those dwellings that currently overlook the site, however, there is no right to a view in planning terms and this in itself does not render the development unacceptable.

There may be an additional level of background noise associated within the development and an increased degree of light pollution, however, given the existing residential context that these dwellings lie within, it is not considered that the proposed development would materially alter the existing situation in those respects.

It is, therefore, considered that the development would preserve the residential amenities of the existing dwellings, in accordance with policy ENV 27 of the UDP and the advice contained within the Council's Supplementary Planning Guidance on Amenity Standards.

Issues relating to the amenities of residents within the development would be considered at the reserved matters stage.

14.3.5.7 Illustrative Layout

The illustrative layout provides for 172 units, predominantly in the form of semi-detached, with fewer detached properties within the inner zones. Once again, the dwellings are to be between two and three storeys in height.

The layout effectively splits the site into 5 development zones, within the network of vehicular and pedestrian routes. These zones comprise 4 central areas, permeated by through lanes and footpaths, and a band of semi-detached properties around the perimeter.

14.3.5.8 External Connectivity

There is a single vehicular access point into the site at the north west corner where it adjoins Flemingston Road, upgraded from the existing with a new roundabout. Flemingston Road is the most direct means of access away from the site towards DTC and it would be impractical to attempt to provide a secondary vehicular link into the existing residential development to the west.

The land to the east is countryside and to the south lies a private golf club. It would, therefore, also be inappropriate to provide links through to these adjoining areas.

There is an existing pedestrian walkway that runs between two terraces of dwellings on Scott Close, adjacent to the western boundary of the site, and an amended illustrative layout does seek to link this through to the new development. Given that this link would access the new SFA adjacent to the main area of open space, it is considered that this should be pursued at the detail application stage, should the principle be considered acceptable in outline.



Figure 15: Illustrative Layout Plan: Stadium / Golf Course

14.3.5.9 Internal Permeability

The main access road into the site meanders through the north west section, but then provides a range of routes throughout the remainder. The development would be split into relatively small zones, divided by lanes, which would assist residents' movements to different parts of the site, and in particular the areas of open spaces and the main entrance.

14.3.5.10 Roads and Buildings

The road layout broadly reflects those contained within the three other SFA sites, in respect of the irregularity and informality of carriageway direction, width etc, and the detail in respect of the surfacing would be considered at reserved matters stage.

In terms of context, the general layout is not reflective of the existing residential developments to the west and north, however, it is not considered that this renders this layout unacceptable in principle. The existing neighbouring areas to the west, north and north west are each of markedly different characters, and are not considered to be exemplary in design terms. Therefore, subject to an effective system of pedestrian and vehicular links being achieved, and the dwellings being of a similar general scale and massing, it is not considered that the building form itself must appear as a direct replication of an existing estate in order to successfully integrate into the wider context.

14.3.5.11 Open Space

The main area of open space is located adjacent to the western boundary of the site, and includes a local equipped area for play (LEAP) and a local area for play (LAP)

The area is well sited in terms of natural surveillance, as it would be directly overlooked by dwellings within this development and existing dwellings on Scott Close to the West. Whilst it is not sited centrally within the proposed SFA, it should nevertheless be adequately accessible to all dwellings due to the internal links through the site, and it is well sited to benefit residents in the adjacent estate.

There are also incidental areas of open space to be provided along the western boundary, which would supplement the formalised areas referred to above.

The policy based assessment of the amount of open space to be provided, relative to the number of users, is contained later in this report.

14.3.5.12 Vehicular Access, Highway Safety Issues and Parking

As noted above, there is to be a single vehicular access point from Flemingston Road, broadly around the same point as the existing access into the site. However, given the extra traffic that would be using this junction, the scheme involves the provision of a new roundabout.

This access has been designed in consultation with the Council's Highways Engineers and is considerable acceptable in highway safety terms, with vehicles entering and egressing from the site benefiting from good visibility in both directions along the carriageway. The Head of Visible Services (Highway Development) has advised in this respect that the junction design complies with national guidance and highway standards.

Since the overall layout within the site is only illustrative, it is not considered necessary to assess the highway geometry in detail now, however, at any future full/reserved matters application stage, full engineering drawings, dimensions, levels and drainage details would be required.

Whilst some internal road layout modifications may subsequently be required as a result of this detailed highway analysis, the Council's Highways Engineers have not raised any in principle objections to a layout of the general form proposed, which is considered to have sufficient regard to the principles of manual for streets.

Finally, each dwelling would be served by its own provision of off street parking, the overall layout and provision of which would be considered at the detail application stage.

14.3.5.13 Landscaping and Ecology

The landscaping strategy proposes the retention of the existing hedgerows along the northern and eastern boundaries, and the hedgerow in the southern part that is considered important under the Hedgerow Regulations 1994. The retention of existing landscaping is also proposed around the pill box on the western boundary.

In addition, supplementary tree planting and landscaping is proposed throughout the site, comprising native species that are suitable to the climate and local soil conditions.

It is considered that the strengthening of the green buffers around the site, as well as strategically sited street trees throughout the development, would soften the impact of the development and assist it developing a semi-rural village character.

While one important hedgerow would be lost, this is not joined to any other feature and is, therefore, not considered to be conducive to biodiversity enhancement. The report advises that the main hedgerow along the eastern boundary, which is to be retained, is the main wildlife feature within the site.

The report also advises that the development would not affect any trees of high value to support bats, but that mitigation would be required in respect of Reptiles, which are likely to be using the golf course. In summary, the submitted Ecology Strategy advises that the development would not result in the loss of any intrinsic ecological value.

14.3.5.14 Drainage and Flood Issues

The drainage and flood risk issues arising from the SFA developments as a whole are assessed in the Hydrology section of the report, however, in summary, The Environment Agency Wales (EAW) have raised no objection to the development of this site for SFA.

No part of this site lies within Flood Zone C2 and, therefore, the occupiers of the SFA should not be at an unacceptable flood risk. The site slopes gently from the north towards the south east corner and, therefore, run off is likely to be in this general direction. However, the site will be subject to a surface water regulation system, to ensure that run off rates do not pose an unacceptable flood risk to adjacent areas.

It is, therefore, considered that the development of this site would not in principle conflict with the aims of Policy ENV 7 of the UDP.

14.4 Picketston Area

That part of the site known as 'Picketston' is located to the north of the new/improved Northern Access Road, enclosed by the highways running through the grouping of residential and farm buildings at Picketston itself, and by the highway running north-south from Froglands Farmhouse, Llanmaes (see masterplan extract below).



Figure 16: Picketston Masterplan extract

14.4.1 Sports & Recreation Facilities

To the immediate north of the Northern Access Road (west of Picketston), sports and recreation facilities are to be provided. In terms of built development, this would include a substantial new sports centre, outside the secure perimeter, which will include: -

- an 8-lane 25m swimming pool,
- a 12-court sports hall with retractable seating for 800 people,
- a fitness suite,
- squash courts,
- an 8-lane all-weather athletics track & pitch (with integrated seating area within the building to facilitate spectator events)
- 12 outdoor sports pitches (4 floodlit)
- a café,
- coach and car parking.

As referred to in the part of this report dealing with Section 106 agreements/negotiations, the above facilities will be for use by military personnel, but also by members of the public and local sports clubs when not required for military personnel use. The aim is to ensure that there will be a high quality leisure 'legacy' for the community as a result of the development proposals.

The design of the leisure centre will, of course, be subject to detailed application, but submissions indicate the provision of a very high quality, contemporary building (between 9 and 12m in height) which will be prominent from the NAR and in the wider landscape, and which will make a strong architectural statement.

Such an approach is to be encouraged for such a large new building and the principle in terms of the scale of the building, its specific siting and intended wider use is supported.

Given that the site slopes from north to south, earthworks are required to create level platforms for the sports pitches and buildings, which will also allow for drainage into attenuation ponds located in the south east corner of the Picketston site. The boundary between the training area and sports pitches will also be defined by proposed bunding with acoustic fencing creating a sizeable landscape feature. The design and impact of such matters will be addressed in reserved matters submissions.

While the building will be in the countryside (Policy ENV 1 refers), the justification for the scale of development proposed for DTC, the need for such leisure facilities to service the facility, and the benefits to the community from shared use of such facilities, are considered to outweigh such policy objections, while their provision as part of the planned training development would ensure they meet the requirements of Policies REC 2 and REC7 within the UDP which favour proposals which result in wider use by the community of existing recreational facilities (subject to meeting established criteria).

14.4.2 Community Facilities

The Masterplan illustrates provision of a crèche and community centre close to the new SFA and sports pitches/ hotel.

The inclusion of these services will extend the provision of community facilities in this part of the Vale. The approach will also ensure that the families and individuals drawn to the area by this development have adequate and appropriate community facilities close by, thus enhancing the sustainability of the scheme as well as satisfying the demand resulting from the development. Accordingly, such community facilities are clearly required and appropriate, and in this respect the time-scale for their provision will be set down as part of a phasing plan and the exact scale and requirement for such facilities will be agreed through subsequent detailed submissions.

14.4.3 Hotel

The Masterplan also indicates provision of a 150-bed hotel, to be sited north of the new access road and adjacent to the sports facilities, which it is stated will be available for use by members of the public and is likely to be used by families attending passing out parades and other visitors to the DTC, as well as visitors to the ABP. The hotel may also be used to accommodate trainees at times of peak operating demand.

The provision of a hotel as part of the development has been a relatively late addition to the scheme, and did not form part of the approved development brief. The 'need' for a hotel as part of the development is therefore open to debate, as is the need for such a facility, if accepted, to be located on site, particularly given that there are existing hotels / bed and breakfast facilities within close proximity to the site, as well as several extant consents for hotel developments (e.g. adjoining Cardiff airport) which could cater for the demand generated by this proposal.

In considering such matters, the submissions advise that this size hotel has been based on appropriate forecast of visitor numbers and is sufficient to account for additional visitors to the development. This increase in bed stock provision represents an increase of approximately 7 % of the existing Vale of Glamorgan bed space stock.

Within this context, Policy TOUR 1 of the UDP advises that “proposals for new hotels outside of the designated settlement boundaries will not be permitted”, and in this respect the proposed provision is clearly a departure from the UDP. Nevertheless, the significance of the College, Associated Aerospace Business park (subject to consent), and leisure and tourism facilities associated with the proposals, is such that there is clearly going to be a level of need for such a facility generated by the proposal, which would most sustainably be retained in close proximity to the facilities.

In this respect, as well as providing such accommodation for the new facilities/ DTC, the proposed hotel will increase bed space within the rural Vale, while the proposed leisure facilities could also have an impact on tourism as the proposed quality of provision suggests that they may attract significant military/ regional events.

Moreover, given the scale of new development being proposed in the Picketston area, including the leisure facilities and Service Families Accommodation, it is considered that the character of the area will change markedly from its current largely rural appearance. In this respect, it is considered that there is an exception to the usual policy restraint against such new development in the countryside.

Although consideration has been given to whether it is appropriate to ‘tie’ the hotel into the development itself, this is considered to neither be manageable or appropriate given that the provision of such a facility has wider tourism benefits in those times when the facilities are not required for DTC. In this respect, it would be expected that the applicant would ensure through land disposal and procurement, that appropriate arrangements were in place to ensure that it catered for the demand from the College at all times.

The design of the building will be subject to reserved matters application, but the scale/ height has been indicated at between 9 and 12 metres high. The likelihood is that any hotel will be operated by an external operator, and therefore close attention would need to be paid to ensure that it is a high quality, sustainable design befitting the architectural solutions identified for the remainder of the DTC development.

14.4.4 Picketston Field Training Area (FTA)

Identified as locations where Military training can be undertaken to ensure that the Contact Skills of the trainees can be maintained during their time at DTC, the Picketston FTA will be used to deliver the following:

- Specific ambush drills (small scale)

- Aerial Farm where airdrops of between 20m and 30m in height will be erected and dismantled for training purposes.
- Obstacle courses and Potential Artificers Assessment Board (PAAB) training - to be located along the eastern side vicinity of Picketston, securely fenced and screened with the potential to use earthbunds as additional visual and acoustic screening.
- Small Arms Firing Range

The submissions indicate that the field training and Respirator training facility, located within the south west corner of the site, will provide flexible external space that is required for the number of different field training activities that are to be carried out, based on scenarios set with natural landscaped areas of mixed types. Training will be of low level tactical type with vehicle movement and munitions fire.

The nature of these uses are such that the main issues relate to visual/ landscape matters (due to changes to the topography) and potential issues from noise nuisance from activities including the firing range and other field training including munitions.

The environmental impacts of the development at Picketston are dealt with in the main section below, which conclude that any impact of the development in terms of noise or other associated impacts can be adequately mitigated by design at reserved matters stage or by condition.

In terms of changes to the landscape, the submissions indicate that changes would be made through the incorporation of sizeable bunds as landscape features, designed to create differing training scenarios over altering terrain within the field training zone. These bunds will also act as acoustic barriers to contain any noisy activity within the perimeter. An attenuation pond will also provide part of the overall training area and allow for surface drainage and collection from the Picketston site.

While these changes to the landscape, and the nature of use of the land as a result, will have a marked impact on the way in which this land is viewed in the wider landscape, nevertheless this will in time be viewed as part and parcel of the wider military use of the area (and indeed already has an element of such use), such that there are considered to be no overriding reasons why permission should be withheld on visual or amenity grounds.

14.4.5 Other Development / Uses

In addition, the Picketston area will provide associated development (utilising existing and new buildings) including a waste compound, storage of training assets and for DTC museum and fleet storage purposes, a Petrol, Oil and Lubrication point (POL) and a vehicle washdown area, a Motor Transport workshop and garage.

A footbridge is proposed over the Eglwys Brewis Road to the north of the main DTC site to provide access between East Camp and Picketston Sport and its external training areas. This bridge provides pedestrian only access.

Each of these elements is necessary and appropriate to the scale of development proposed.

14.4.6 Picketston General Conclusions

The submissions advise that the function of the Picketston area as a whole is “to provide external training, a centre of sporting excellence, community facilities and Service Family Accommodation”, and that these functions are organised and clustered into their relevant uses to create efficiencies of movement between them.

In this respect, not only are the individual proposals considered to be acceptable, but, taken together with the SFA at North West camp and South Picketston (addressed elsewhere in the report), they are considered to represent an appropriate and sustainable grouping of uses. As stated above, detailed analysis of the impact of the training and associated facilities in respect of noise and potential impact on residential amenity is contained within the Environmental Impact section of this report.

14.5 Castleton Area

The part of the site known as ‘Castleton’ is located to the north of the existing highway serving Castleton itself, to the west of Cowbridge Road, and to the south of the existing residential development and Golf Course opposite East Camp.

14.5.1 Field Training Area

A second Field Training Area (FTA) is proposed to the east of Cowbridge Road at Castleton, which would be used for day and night training, on foot and vehicle based training, which would include use of mini flares, thunder-flashes and ground-based smoke grenades. Essentially it would be non-noise generating activities only, such as camping, crawling, running, hiding, driving, etc.

According to the submissions, the FTA at Castleton will be used for low level/intensity military training for up to 100 people (covered by strict MOD regulations), and tracked vehicles, such as tanks, will not be used. The FTA will predominantly be used during the working week, with activities largely daytime based. However, there will also be night time activities at times, the applicant advising that practising in these conditions is an essential part of military training.

Submissions advise that there are no plans to use blank or live ammunition on this area at this time and in the event of the development being approved, a condition will be imposed to this effect.



Figure 17: Castleton Masterplan extract

Proposed activities on site will include:

- Hardstanding for vehicle parking and turning space in order to access the training site;
- Temporary toilet facilities in association with training on the site;
- A shelter for holding briefings; and
- Storage areas for non-hazardous materials in association with training on the site.

The submissions advise that, for larger scale drills where blank firing is required, sites remote from DTC will be used.

In light of the nature of submissions, the use of this land for the specified purposes is not considered to cause any demonstrable harm to visual or local residential amenity, given the absence of buildings and relatively limited impact of such activities (it is noted that no munitions fire is proposed).

A 50 metre planted buffer is proposed where the site adjoins Castleton Road and residential properties, in order to assist the integration of this change of use into the local area.

Access to the site will be via the existing field entrance (with improvements) off Cowbridge Road, and will not therefore be via Castleton Road. An emergency access is, however, shown onto Castleton Road in the south, although its use for emergency purposes only can be conditioned to ensure that there would be no unacceptable harm to residential amenity or highway safety by use of that road.

The Public Rights of Way Officer has expressed concern that the agricultural land crossed by Public Footpath (No 6 St Athan) is to be used for military exercises, yet there appears to be no detail as to how walkers will be protected when using this right of way during these exercises.

The extinguishment of this path or temporary closure of this path would be unacceptable due to its importance of linking southern rights of way around St Athan and, at this time, it is not known whether a diversion would be acceptable to the proposal.

In response, the applicants have stated that it is not unusual for Rights of Way to cross MoD training areas and that the relatively low level of activities that would be permitted on the Castleton site would not require the existing RoW to be diverted. They also advise that there would not be a requirement for any physical protection for walkers, and normal operations of the proposed FTA would not require any temporary closure of paths (subject to the normal national security considerations).

14.5.2 St Athan Golf Course

Works to the existing St Athan Golf Course at Cowbridge Road, including alterations and rearrangement of the course, are proposed to account for the permanent loss of land (affecting four existing holes) within the existing golf course as a result of the proposed Service Families' Accommodation site.

Such works involve an extension to the golf course, including construction of 6 new greens; 5 new tees, 4 new fairways, and 2 altered fairways (the first half of the 1st and 8th holes remain unchanged); and a new practice area.

The physical / visual impact of this golf course extension onto existing agricultural land is considered to be acceptable given the justification for such an amended layout, while such proposals are not considered to have any demonstrably harmful impact on the landscape character or visual amenities of the Lower Thaw Valley Special Landscape Area (Policy ENV 4 refers), of which the site forms part. Further, there is no issue concerning the loss of high grade agricultural land quality given that golf courses are not deemed to constitute permanent development in any case.

The submissions indicate that there will be no disruption to users of the golf course as a commitment has been made to replace holes before the SFA construction takes place. The need for such works upfront has been put forward by the Golf Club as notified owners, and this is considered necessary in order to ensure there is no disruption to existing sports/ recreational facilities in the locality.

14.6 Other Matters – Infrastructure

14.6.1 Foul Drainage and Wastewater Treatment

The applicants submissions have identified that increases in waste water flows generated by the development would exceed available treatment capacity at the existing Llantwit Major WwTW and West Aberthaw WwTW. As a consequence,

sewerage requisition had to be combined with upgrading of the wastewater treatment facility.

DCWW have produced an outline design for connecting foul water discharges from the proposed development site to the existing DCWW sewerage, treatment and disposal system. The proposed scheme comprises a new foul pumping station on-site and a rising main to deliver foul flows to Llantwit Major WwTW, as well as an extension of this WwTW to accommodate the additional flows.

Only foul flows from the development sewerage system will gravitate to the new foul pumping station. An emergency overflow is to be provided with two potential receiving watercourses: the Boverton Brook and the Nant-y-Stepsau. Final overflow arrangements (and location) would be subject to agreement on water quality and flood risk issues with the EAW, Land Drainage Authority and riparian land owners.

The rising main has been located to avoid major roads and minimise disturbance to land owners and known sites of ecological (and archaeological) significance. No designated or protected sites, public water abstractions or private water supplies exist between the foul pumping station at the site and Llantwit Major WwTW. The rising main has been located adjacent to field boundaries and, as much as feasible, utilises existing field access points and gaps in hedgerows. Construction of the rising main will also involve five road crossings, two bridge crossings and one crossing through an underpass below the Cardiff-Bridgend via Barry railway line. No changes in flood risk will arise, as the rising main will not obstruct any watercourse flows/cross-sections or reduce flood storage capacity within the floodplain.

The rising main is approximately 5.5km in length, rises from ground level 42.5m AOD at the pumping station to 77m AOD at the WwTW. The pipeline will be 300mm internal diameter, of ductile iron or polyethylene material. All bends will be equipped with concrete thrust blocks to resist pressure forces.

Upgrade works at Llantwit Major WwTW will see the current 'flow to full treatment' increase from 105 l/s to 142 l/s and will ensure that the works are capable of treating all incoming flows to the standards agreed with the EAW. Furthermore members should note that all the above works will be permitted development and will not require the benefit of planning permission, being undertaken by or no behalf of the sewerage undertaker.

14.6.2 Water Supply and Re-Use

It is proposed to supply the site with three water supplies which are addressed as follows; the supply to the Picketston site, the existing Hangar supply, and a new supply for East Camp. The proposed water supply infrastructure for East Camp comprises the incoming service from the DCWW main, underground storage tanks, duplicated pumping plant (in the same building) and a ring-main infrastructure around site for distribution to individual buildings. The proposed infrastructure for Picketston comprises the incoming service from the DCWW main, distribution to the new buildings on the site and local storage within the individual buildings. It is proposed that the existing Hangar supply arrangement

and associated storage within the building will be retained with any necessary modifications to suit the re-development.

Infrastructure for East Camp will be based on centralised underground stage of potable water in preference to traditional in-building storage. Centralised storage will be at a single location. It is proposed that a half day's consumption of water will be stored, and the storage and pumping equipment will be arranged with duplicated elements to enhance the availability of supply, particularly allowing for routine maintenance and local plant failure. It is proposed that the pumps and associated equipment be backed up by local standby generators.

Members should also note that additional opportunities for the recycling of water are being considered as part of the ongoing design, in particular rainwater harvesting. This will involve the use of rainwater collected from roofs and its distribution for irrigation. Further to the above all new buildings will achieve BREEAM excellence standards with respect to water and energy use. Refurbished buildings will achieve BREEAM 'Very Good' standards. Water supply requirements for all other development areas will be confirmed to enable DCWW to undertake water supply modelling to establish if improvements to the water supply network may be required in the site area to meet future demand.

15. TRAFFIC & TRANSPORT IMPLICATIONS

The proposals for the redevelopment of MoD St Athan are expected to generate substantial levels of additional traffic, which will include heavy goods vehicles as well as private cars. It is essential that the DTC and ABP developments are accessed by roads of appropriate design, specification and construction. It is also important that any potential traffic congestion on the existing local road network and potential adverse environmental impacts in existing settlements are avoided as far as possible and mitigated where necessary. In accordance with sustainability principles it is essential that the development proposals also make appropriate provision for pedestrians, cyclists, public transport and car sharers to ensure they are accessible by more sustainable modes of transport than the private car.

One of the fundamental principles in the masterplanning of the development has been the aim to reduce the need to travel, especially by car. With this in mind, the development is self sufficient in many ways. Single living quarters are provided within the wire alongside community, recreational and leisure facilities; additional leisure and community facilities are provided outside the wire but in close proximity; and the Service Family Accommodation (SFA) is located within walking / cycling distance of the DTC.

The application is supported by a Transport Assessment (TA) which considers the joint impact of the DTC and ABP on transport infrastructure and the highway network. In addition individual Travel Plans have been prepared for the DTC, ABP and for construction traffic.

The development proposals include works within the highway and various road and junction improvements which are considered at section 14 above, and other works in respect of sustainable transport facilities which are outlined in more detail below.

15.1 Northern Access Road (NAR) & Off site highway works

Details of the NAR and off site highway works are addressed in section 14.1 and 14.2 above, as is an analysis of the rationale leading to the submission of the said schemes and the likely impacts and scope for mitigation of those impacts.

15.2 Sustainable Transport Provisions

Local and national planning policies emphasise the need for developments to be accessible by alternative modes of transport than the private car. Therefore, it is essential that facilities are provided or enhanced for sustainable transport (i.e. for pedestrians, cyclists, public transport patrons etc.) serving the site. In this case, the developer and the Council have negotiated and agreed a range of on and off-site measures to ensure the site is accessible by sustainable travel modes, which are outlined below.

The development proposals include the following provisions which will provide and enhance access to the site by sustainable travel methods:

1. New Northern Access Road (NAR) including:
 - i. A shared 3m wide cycle / footway along entire length;
 - ii. new bus shelters and laybys at key locations: i.e. at main entrance to ABP near entrance to the leisure facilities, and at entrance to Picketston Close (replacing existing);
 - iii. DDA compliant crossing points at appropriate locations: i.e. at entrance to 'Tremains Farm' SFA, at entrance to Froglands Farm and Rose Cottage, at entrance to 'North of West Camp' SFA, at west entrance to playing fields, near bus stops at ABP entrance, at Gate 2 / main entrance to leisure facilities, at entrance to Picketston Close, ;
2. New shared footway / cycleway on northern side of the B4265 between the NAR and Llanmaes Road.
3. B4265 / Llanmaes Road Junction Improvement – to link to new footway / cycleway on B4265 and provide pedestrian crossing facilities (Plan No. 003622/WD/014'C').
4. Upgrade the existing steps on north side of B4265 to link to Public footpath No. 40 to be DDA compliant (No plan submitted).
5. Upgrade the existing steps on south side of B4265 to link to Monmouth Way to be DDA compliant. New footpath on south side of B4265 linking these steps to the pedestrian crossing points at the entrance to the NAR (Plan No. 003622/PA/131'A').
6. New / improved 3m wide footway / cycleway and grass verge along existing road north of West Camp between the Cowbridge Road / Flemingston Road junction and the NAR (Plan No. EBR700).
7. Enhance the existing footway on western side of Cowbridge Road to upgrade it to a shared footway / cycleway linking south into St. Athan

- village including provision of a DDA compliant pedestrian crossing on Cowbridge Road by entrance to golf course.
8. Improved 3m wide footway / cycleway along Flemingston Road between Golf Course SFA site and Cowbridge Road, plus crossing points with tactile paving (Plan No. EBR711).
 9. Upgrade existing zebra crossing on Cowbridge Road near existing entrance to East Camp with enhanced lighting and anti-skid surfacing.
 10. Existing bus stops in the vicinity to be upgraded or replaced where necessary with new shelters, kassel kerbs, bus boarding platforms and timetable casing (Plan No. 002419/BS/002) at the following locations:
 - i. Eglwys Brewis Road near Eagle Road (south side only), north side to be replaced with new stop near entrance to 'Tremains Farm' SFA
 - ii. Eglwys Brewis Road near Bethesda'r Fro Chapel, north side to be replaced, south side provision of new stop;
 - iii. Eglwys Brewis Road near Picketston Close – existing shelters to be replaced by new stops on NAR;
 - iv. Eglwys Brewis Road near Walnut Grove (both sides).
 11. Pedestrian / Cycle Links within and from the SFA sites (see SFA Design and Access Statement).
 12. New footway link south from 'North of West Camp' SFA, west along north side of Eglwys Brewis Road to bus shelter, crossing point with tactile paving, footpath along south side to link up public house with Eagle Road.
 13. New footway on north side of Eglwys Brewis Road at entrance to 'Tremains Farm' SFA, crossing point with tactile paving and dropped kerbs (Plan No. TF510).
 14. New bus stop / lay-by on north side of Eglwys Brewis Road at entrance to 'Tremains Farm' SFA (Plan No. TF510) replaces the existing bus stop near the entrance to Eagle Road.
 15. New bus stops with lay-by's to be provided on B4265 to serve the southern entrance of the ABP.
 16. Enhance existing zebra crossing at The Square in St. Athan village, with enhanced lighting and antiskid surfacing.
 17. Improvements to St. Athan / B4265 crossroads to include pedestrian crossing points and new bus lay-by but maintain existing bus shelter (Plan No. 003622/PA/350).
 18. Improvements to the existing public right of way (PROW) at Gileston to Oldmill to provide a DDA compliant route in addition to the existing steps (Plan No. 003622/PA/420).

19. Provide a dedicated feeder bus service between 06:00 and 19:00hrs for any visitor to the development, linking Llantwit Major Train Station with the main DTC gate, which will be available to anyone with a valid train ticket. The service will be timed to meet the trains, and will be a 25 seat capacity DDA compliant low floor vehicle (estimated yearly cost of £125,000);
20. 'White fleet' bus service will be used during peak times to transport uniformed personnel between Llantwit Major Train Station with the main DTC gate to meet additional demand from service personnel. DTC white fleet of 30 vehicles on site (a mix of minibuses, 45 and 59 seater coaches) will be used to transport students to Barry / Cardiff / Bridgend during Friday and Sunday peak times because the rail network does not have sufficient capacity at present.
21. Provision for cyclists within the DTC, including a cycle network within the site, a pool of cycles for service personnel and a total of 1563 cycle parking spaces proposed throughout the development.
22. Rail cards will be provided free of charge to service personnel to encourage travel by public transport.

Conditions will ensure that detailed plans are submitted showing these works and their implementation will be required prior to beneficial occupation of the development.

15.3 DTC Travel Plan

The DTC application is supported by a Travel Plan with an overall aim to reduce the number of single occupant vehicles arriving to the site by 20% by 2017 compared to the opening year. The Travel Plan is focussed on the specific transport issues which affect personnel commuting to the development at DTC St. Athan. It recommends a wide range of measures to counteract dependence on the car. The Plan is designed to encourage individuals to make the most appropriate choice for their journey while allowing retention of freedom of choice. A dedicated Travel Plan Co-ordinator will be appointed to implement the Plan. This coordinator will oversee the development of the travel plan, liaising with departments, setting up steering groups and maintaining senior support and commitment. The Travel Plan Co-ordinator will have a budget for the setting up and promotion of these initiatives.

A condition will ensure that the proposals contained in the DTC Travel Plan can be monitored and enforced where necessary.

15.4 Construction Travel Plan

This Travel Plan is designed to cover the construction of the ABP / DTC development at St. Athan. At this stage plans for the construction period are still emerging, however, it is expected that construction will begin with a target completion date at the end of 2015. The workforce is expected to peak at approximately 2,000 at the end of 2012, while deliveries are expected to peak early 2013. This Travel Plan is focussed on the specific transport issues which affect the construction workforce commuting to the development at ABP and DTC

St. Athan. It recommends a range of measures to counteract dependence on the car. A key recommendation of this Plan is to identify, as far as possible, the locations from which the workforce will be travelling from. Once this has been established, targets can be developed and the exact nature of the sustainable transport measures that will be offered will become clearer. A dedicated Travel Plan Co-ordinator will be appointed to implement the Plan.

A condition will ensure that the proposals contained in the Construction Travel Plan can be monitored and enforced where necessary.

15.5 Transport Assessment

The application is supported by a Transport Assessment (TA) including a Transport Implementation Strategy and Travel Plans for site specific parts of the scheme. The submitted Transport Assessment reviews the existing highway network and considers the impact upon the transport infrastructure at critical stages of the above schemes. These are: the initial construction phase including the construction of the new NAR (expected 2010); the opening of the DTC with completion of the SFA and highway improvements (expected 2014); and the completion of the ABP (expected 2028).

Traffic generation for the development has been based on a combination of the use of first principles, experience of other Ministry of Defence establishments and the analysis of the TRICS database.

The transport assessment has been assessed on behalf of the Local Planning Authority by specialist transport consultants Parsons Brinckerhoff. Their report concludes that the TA and Travel Plan for the developments are fit for purpose, reliable in terms of evidence base, methodology, analysis and conclusion in respect of the development proposed, and includes an appropriate Transport Implementation Strategy (TIS) to mitigate the impacts of the developments. They recommend that all mitigation commitments in the TA and Travel Plans should be controlled by condition or legal agreement. Their final report is attached in full at **Appendix 17**.

15.6 Impact on the Highway network

The TA identifies those junctions which will be adversely affected by the development proposals and proposes works where necessary and feasible to mitigate those impacts, as outlined above. However, representations have been submitted in respect of the following highway impacts and need further consideration.

15.6.1 Impact on A473 / Waterton Cross Roundabout

Bridgend County Borough Council have commented that the submitted TA does not consider Waterton Cross Roundabout although traffic levels on the A48 will rise as a result of the development. They consider the cumulative impact of the development will undermine the effectiveness of the roundabout and the section of the A473 between the Waterton Cross Roundabout and the Ewenny junction. They request a section 106 planning obligation to mitigate this impact, through the

construction of the Brocastle link road (100% funding) and improvements to the A473.

The appointed transport consultants, Parsons Brinckerhoff, advised that the development does have a significant effect on the A48 Crack Hill and it is reasonable that the developer should be expected to demonstrate that the development does not have a significant impact upon the Waterton Cross Roundabout.

In a letter dated 21st August 2009, the developer provided further information in respect of a SATURN Model analysis that has been undertaken in respect of the Waterton Cross Roundabout and the section of the A473 between the Waterton Cross Roundabout and the Ewenny junction. They conclude that the impact of the development will be minimal and not sufficient to justify a contribution towards improvements at this junction. The Council's appointed transport consultants, have considered this additional information and have concluded they do not consider a contribution towards the Brocastle Link Road is necessary or justified in relation to this application.

15.6.2 Requirement for the Airport Access Road

In their representations, St. Athan Community Council urge the Council to pursue the Welsh Assembly Government to provide the Airport Access Road to improve access to the site. UDP Policy TRAN 1 (Strategic Highways) states that land will be protected and provision made for the development of the Airport Access Road (AAR). The importance of establishing a high quality link road to Cardiff International Airport from the M4 and Cardiff is seen as a unique strategic objective.

At the time of writing there is no commitment by the Welsh Assembly Government in respect of the Airport Access Road and no route has been confirmed. Therefore, the submitted TA does not take account of any potential changes to flows as a result of this scheme. The TA does not identify a requirement for the AAR to be provided as a result of the proposed development as it is principally required to improve access to Cardiff International Airport. However, if implemented such a scheme would be likely to improve access to the DTC and ABP from the M4.

The TA does note that in March 2007 the Welsh Assembly Government provided the Vale of Glamorgan Council with Principal Road Grant Funding for preparation/design costs to undertake improvements to the A4226 Five Mile Lane as part of the Transport Settlement Grant for 2007/2008. These works should improve access via this route to the site.

15.6.3 Impact on Llysworney

Llandow Community Council have commented that the existing road network to the west will be not able to cope with the increase in traffic resulting from the development. They state that the infrastructure is already inadequate and raised volumes of traffic will only cause more delay, disruption and danger. They strongly dispute the applicant's claim that the incremental effect of St Athan traffic will be

relatively minor. They express disappointment at the failure to provide a bypass for Llysworney.

The St. Athan Development Brief highlighted the relevance of UDP Policy TRAN 2 (Local Highways) to the development proposals. This states that land will be protected and provision made for the construction of local highway schemes including a Llysworney Bypass. It is identified as important to relieve environmental and safety problems caused by a significant number of heavy lorry movements through the village of Llysworney along the B4268 which links Llantwit Major, Llandow and the A48. To date the Council has not been able to secure funding for this local highway improvement.

The development proposals do not include provision of the Llysworney Bypass. The proposed construction traffic routes, shown on plan 'CG/002419/TA06' indicate construction traffic heading north will turn onto the B4270 (Llantwit Major Road) heading east towards Cowbridge to join the A48 at that point, rather than routing through Llysworney.

In terms of post-construction, the daily operation of the DTC is not expected to generate significant traffic flows through Llysworney, such to justify the provision of the Llysworney Bypass. The appointed transport consultants Parsons Brinkerhoff considered this issue and concluded that an increase in HGV movements along the road as a result of the development will be minimal. Furthermore, the section 106 agreement will require a traffic management contribution to enable the traffic impacts of the development on the local road network to be monitored and managed in due course when the impacts are known.

15.6.4 Impact on minor roads in the vicinity

The applicants state that traffic-flow changes on the myriad of minor roads between the A48 and the development site are difficult to estimate, and this is a conclusion that is accepted. They do state, however, that it is not envisaged that the proposed developments will significantly increase lorry numbers on these routes.

Within this context, there is clearly a potential for the local, rural routes to see an increase in traffic numbers, particularly from those with knowledge of the area (or who gain such knowledge). The potential impact of such traffic generation therefore needs to be carefully considered.

In this respect, no improvements are currently proposed to existing minor roads which could well become more intensively used following the implementation of the development. Promoting improvements to these rural roads now would most likely encourage their increased use. It has therefore been agreed that, the actual rather than estimated effects of the development will be assessed on the adjacent minor roads following the opening of the DTC. This review will be undertaken by the Council as local highway authority and any appropriate traffic management measures subsequently determined.

The section 106 agreement will include an obligation requiring the developer to set aside a sum of £30,000 to monitor and assess the impact of the increase in traffic resulting from the development on minor roads in the vicinity of the site. The additional sum of £250,000 will also cover the cost of any necessary traffic management measures required to mitigate the impacts identified.

15.6.5 Requirement for a roundabout rather than traffic signals at B4265 Gileston / St. Athan junction

Representations have been submitted that seek the provision of a roundabout at the Gileston – St Athan junction. The scheme includes the provision of a traffic controlled junction at this location and this solution has been accepted as being appropriate. The benefits of a traffic controlled junction is that such a proposal allows for and includes the provision of safe pedestrian crossing points and links to adjoining and enhanced footways. Such provision would be far more difficult to achieve with a roundabout. Furthermore given the setting of this junction adjoining the Heritage Coast to the south and west, a traffic controlled junction is a far more appropriate solution at such a location.

15.7 Impact on Rail Services

Section 16 of the submitted TA considers the impact of the development on rail services. It acknowledges that the DTC and ABP developments will significantly increase demand on the local public transport network. The development proposals include walking / cycling routes to link the developments with Llantwit Major Railway Station and a regular shuttle bus will link the station with the main DTC gate throughout the working day. The station is situated on the Vale of Glamorgan Line which links Cardiff and Bridgend.

The TA concludes that the majority of the impact on rail services on the VoG line during the AM and PM peaks is due to general patronage growth and not attributable to this development. This is in part due to the tidal flow of the development creating counter commuting to the existing demand. There is minimal impact on typical commuting flows and demand generated by the development will help fill existing spare capacity. Outside of these peak hours existing 2-car sprinter sets will be sufficient to meet the predicted demand.

It is proposed to accommodate Friday and Sunday peak demand due to weekend travel by use of the DTC's White Fleet rather than strengthen train services on the Vale of Glamorgan Line. This will take the form of a service of the available white fleet programmed to meet the key train arrivals at Barry/Cardiff/Bridgend to collect students returning from weekend leave, or arriving for the first time. Also the white fleet will be available to transport students at the end of the working week to Barry/Cardiff/Bridgend on a timetabled basis.

It is considered that these proposals are acceptable and can be controlled by condition. Therefore, the impact of the proposed developments on the rail network can be appropriately managed and mitigated to ensure that rail services on the Vale of Glamorgan Line are not undermined as a result of the developments.

15.7.1 Requirement for a train station at St Athan

Objectors have raised the potential for the development to deliver a new railway station at St. Athan (west camp) on the Vale of Glamorgan Line. Such a requirement has been considered but for a number of reasons has not been progressed. At the outset the developer has put forward the use of White Fleet as well as the provision of a dedicated feeder service to link Llantwit Major train station with DTC main gate. In addition the development will make provision for a cycleway / footway link to Llantwit Major Station with the development. This is considered a highly appropriate solution particularly given that the location of a new station at west camp would itself be some distance from the proposed main gate. Furthermore, any scheme for a new railway station would have to have due regard to the current service provision (including timings) of the Barry to Bridgend train services. Any new station in such close proximity to Llantwit Major Station would in all likelihood have a detrimental impact on the timings and hence frequencies of existing services.

15.8 Impact on Bus Services

Section 17 of the submitted TA considers the impact of the development on bus services.

The TA recognises that existing bus services have a relatively low frequency and will not be able to meet the peak demand created by the development on a Friday evening when there is likely to be a high demand from personnel travelling home for the weekend. The applicants have entered discussions with the local bus operators and advise that it is unlikely to be commercially viable to purchase new vehicles to meet the peak demand, given the lack of demand during off-peak times. Therefore, it is proposed to use the 30 vehicle 'white fleet' to supplement existing services during the peak times.

In addition, the proposals include the provision of a regular free shuttle bus which will link Llantwit Major Railway Station with the main DTC gate throughout the working day, for all passengers with a valid rail ticket. This will be secured through the section 106 legal agreement.

Furthermore, the proposals include replacing and/or upgrading the existing bus stops in the vicinity of the site (as outlined above), which will improve facilities for existing and new bus users. This can be secured through conditions.

In view of the fact that the MoD will make use of their own white fleet to meet their travel needs, it is considered that the development proposals will not adversely affect existing bus services.

15.9 Impact on cycle and pedestrian routes

As outlined in the sustainable transport provisions above, the proposals include a number of new and improved facilities for pedestrians and cyclists which will improve access for the existing communities in the vicinity of the site and provide appropriate access to the development proposals themselves.

St. Athan Community Council have commented that the pedestrian desire line from the new housing at the golf course SFA site to main gate passes through the unadopted footpaths of the Explorers Estate. They contend that these should therefore be adopted or a commuted sum required to pay additional maintenance costs.

In response, the applicant has advised that the existing East Gate will only be used for emergency access and therefore the desire line will be to the new main gate via Flemingston Road and the NAR where improvements to the footways are proposed. Therefore, it would not be appropriate to insist that the developer pays to enhance the existing footways through the estate which are currently not adopted.

There are not considered to be significant adverse impacts on existing pedestrian / cycle routes in the vicinity of the site resulting from the proposed development. On the contrary, your officers have negotiated with the developers to ensure that there are a range of improvements to access for pedestrians and cyclists, which are being delivered as part of the development.

15.10 Public Rights of Way

Members will note that concerns have been raised by the Councils footpath officer in respect of footpath number 6, St. Athan, which crosses the area to be used for military training exercises. However it is clear that there no proposals to divert this footpath and none of the activities intended to be undertaken in this training area will adversely affect the use of the PROW which will remain open at all times.

It is also noted that the Gileston to Old Mill road improvements have raised some concern, due to the potential for increased speed of traffic along this straightened road. However no objections have been raised by the highway officer in this regard. Furthermore the works will provide new DDA compliant access to the PROW at this point.

In respect of footpath 40 which crosses the B4265, the new junction arrangements will include enhanced crossing facilities for pedestrians. As part of these proposals the existing steps at this location will be upgraded to be DDA compliant

The Highway Officer confirms that existing Public Rights of Way will need to be diverted onto the proposed footways/cycleways and future crossing points as required in order to accommodate the alignment of the NAR, SAR and the other highway improvements that are required to be implemented to mitigate the effects of the developments under consideration.

Members should also note that your officers have negotiated a sum of money towards general improvements in the PROW network within the vicinity of the site (see section on 106).

15.11 Construction Traffic Impact

The development proposals will generate a significant number of construction traffic movements throughout the life of the construction, which will last several years. Prior to construction, detailed haul routes need to be agreed as contracts are finalised and this can be controlled by condition. Signing will be used to highlight the agreed construction route to drivers. Again this can also be conditioned.

The applicants propose the early construction of the NAR to enable it to be used as the major haul route to the DTC and ABP sites from the B4265 during the peak construction activity. It is estimated that the NAR will open to DTC traffic at a haul road standard in the third quarter of 2010. Prior to the NAR being created, construction vehicles will have to use Eglwys Brewis Road, which will be improved in advance as detailed in section 14.2.2.2.1 above. Access to the site will initially be via the ABP North Gate and following sequential improvements to Eglwys Brewis Road, in two stages, access will then be provided to DTC Gate 2/3.

In an attempt to reduce the impact of delivery vehicles the following measures will be introduced:

- deliveries vehicles will be given allocated delivery slots;
- drivers must not arrive more than 30 minutes prior to their allocated delivery time;
- all deliveries must leave site immediately after being off loaded/reloaded;
- no delivery vehicles shall be parked on site overnight.

The proposals contained within the submissions are generally endorsed by the Council as highway authority as they reduce the impact of the construction traffic on the local highway network.

However, an issue remains in respect of the impact of construction traffic on existing safe routes to school. The Eglwys Brewis Road route is a recognised walking route to school linking the community of West Camp and Eglwys Brewis to primary and secondary schools in Llantwit Major. However, with the additional heavy vehicles and construction traffic arising directly from the development, it is possible that the route will be deemed unsafe for a temporary period, when assessed in accordance with the identification of hazardous routes to school guidelines. This may have implications for the provision of home to school transport to Llantwit Major Secondary School and St. Illtyd's Primary School which would have to be provided whilst construction is taking place. This cost, which arises directly as a result of the development, should be borne by the developer not the tax payer. This is discussed further under the section 106 considerations.

16. GENERAL SUSTAINABILITY

16.1 Policy Background

PPW (as amended by MIPPS) promotes sustainable development by placing sustainability at the heart of its decision-making processes, with the need to promote sustainability through good design emphasised in PPW and supported by recent TANs such as TAN 12 Design (2009) and the draft TAN 22 : Sustainable Buildings. In essence, these documents detail a new *sustainable buildings planning policy* in Wales.

In this respect, PPW advises that to create sustainable development, design must go beyond aesthetics and include the social, environmental and economic aspects of the development, including its construction, operation and management, and its relationship to its surroundings, while emphasising the importance of promoting the efficient use of resources, including land; maximising energy efficiency and the efficient use of other resources; and tackling the causes of climate change.

Although in draft form and out for public consultation since May 2009, it is notable that TAN 22 'Sustainable Buildings' addresses matters such as:

- sustainable buildings standards
- reducing carbon emissions by using the energy hierarchy that reduces emissions in the most effective manner, and use of Low and Zero Carbon technologies to achieve such aims
- preparing development proposals to deliver sustainable building standards
- setting local requirements for sustainability .

Within this context, and that of the development as a whole, it is also notable that both WAG and the MoD (the applicants in the ABP and DTC applications respectively) have an in-built requirement to place sustainability at the heart of their development decisions, as demonstrated by the following documents:-

- MoD Sustainable Development Action Plan (2007-12) which seeks to demonstrate how the MoD intends to lead by example and deliver sustainable development .
- The WAG's "One Wales: One Planet" (currently in draft), which places sustainability as the central organising principle of WAG and the public sector, and identifies a number of new high level commitments to promote sustainable development. This includes a requirement for projects promoted or supported by WAG to adopt standards including:-
 - Aspiration for all new buildings in Wales to be zero carbon from 2011
 - BREEAM *Excellent* for all new buildings and *Very Good* for all refurbished buildings built on land that WAG have an interest in
 - All new housing required to meet a minimum of level 3 of the Code for Sustainable Homes

16.2 The Proposals

The application has been accompanied by extensive submissions in respect of the sustainability of the proposals with an expectation on all sides that the development should demand and embody the highest standards of sustainability. In this respect, a 'Sustainability and Energy Statement' has been submitted which states, in its executive summary that:

“low environmental impact has been at the heart of the design of the proposed DTC St Athan development”.

The statement “outlines the development’s sustainability, energy efficiency and renewable energy strategies for meeting the sustainability targets set out by the Vale of Glamorgan County Council, the Welsh Assembly Government (WAG), and the Ministry of Defence (MoD)”, while the main elements of the submission can be broken down into the following areas to demonstrate the sustainability of the proposals: -

- Substantial reductions in energy usage achieved through passive design solutions such as, natural ventilation, solar control and passive daylighting;
- Water conservation and reduced water consumption (construction and operational phases), including rain water-harvesting
- On-site energy generation via a Central Energy Centre to provide heating and electricity to the site via a district heating network supplied by a Biomass Combined Heat and Power (CHP), with the potential of reducing CO2 emissions by up to 60%
- Travel Plans to reduce car-dependency, pollution & congestion both during construction and operation
- Living accommodation (SLA and SFA) co-located with the DTC for social reasons and to reduce travel-to-work and minimise dependence on the private car
- Use of materials with low overall environmental impact (from Green Guide to Specification), sourced locally where possible.
- A Bespoke BREEAM pre-assessment of DTC buildings indicating that “Excellent” ratings are being achieved for new buildings, “Very Good” for refurbished building and Code for Sustainable Homes level 4 for the Service Family Accommodation (SFA)
- Sustainable Drainage Strategy to adequately manage and attenuate the surface water runoff from the development
- Adoption of a Waste Management Strategy with the aim of “working towards Zero-to-Landfill with a Total Waste Management Approach”.

16.3 Analysis

The Unitary Development Plan contains strategic policies such as Policy 2 which favour developments which encourage sustainable practices including energy conservation and efficiency, waste reduction and recycling, pollution control,

biodiversity and conservation of natural resources, minimising the need to travel, and high standards of design.

The Council's expectations for major development in particular are embodied within the adopted SPG on Sustainable Development, and are considered to reflect the more recent draft and approved national policy documents detailed above.

In considering the above submissions, it is clear that the general sustainability of the scheme in terms of its construction and operational phases are of the highest standards, with sustainability placed at the heart of the design and decision-making process, and generally following the hierarchy as set out in the Renewable Energy Route Map for Wales:

1. Be Lean - Reducing energy consumption through passive design means
2. Be Clean - Supply energy cleanly and efficiently
3. Be Green - Use of low emission energy sources

In this respect, the hierarchy has clearly and logically been applied to the design and development of the project, such consideration including:

- incorporating passive design solutions by considering site orientation and layout during master planning
- incorporating energy efficiency measures through the design of services and improved fabric performance
- calculating predicted design energy consumption rates and associated annual CO₂ emissions for the development in comparison with good practice benchmarks
- assessing the viability of incorporating low and zero carbon energy sources, including a site wide energy network using on-site electrical generation

Nevertheless, there are key areas where further examination is warranted, these relating to: -

- Transport
- Design, Orientation etc.
- Low and Zero Carbon (LZC) choices including Energy Centre; and
- Waste Management

16.4 Transport

While the implications for transportation, private and public, and the highway network in general are considered in the detailed section on traffic and transport, it is notable that the development has sought to incorporate a number of design and implementation measures to ensure the sustainability of the scheme as a whole is not compromised during construction and operational phases, these including: -

- The siting of service accommodation within the camp (SLA) and close to the training facility (SFA) in order to reduce reliance on private transport;
- Encouraging service personnel and staff to travel by means other than the car, including use of pool bikes, an integrated network of pedestrian /cycle

routes within and between the college and SFA and improvements to public transport;

- Use of electric 'service' vehicles onsite;
- Potential use of bio-diesel trucks to deliver biomass to the energy centre.
- Submission and implementation of Green travel Plans relating to construction and operational phases, as well as schools.

While arguments made in the representations by many concerned residents relating to the use of Greenfield land, the provision of a NAR across such land, and the sustainability of such solutions are acknowledged and noted, nevertheless the rationale behind the need for such highway access and accommodation for service personnel to be close to the DTC are considered to override the normal policy presumption against such development in the countryside. In this regard, the opportunity that arises as a consequence of siting specific or bespoke housing on and adjacent to the college site allows the planning system, in this instance, to influence sustainability in terms of travel to work patterns. This opportunity to minimise the need to travel is one of the key drivers in accepting the siting of the SFA as put forward in the proposals.

Clearly, the provision and implementation of measures such as those detailed above is integral to the successful implementation of a sustainable development and community, and therefore many of these matters will be required by condition.

16.5 Travel Plans

The application has been accompanied by Travel Plans relating to the constructional and operational phases of the development, as well as school transport.

These have informed the Transport assessment, and are considered to be an integral and fundamental element of the overall package of sustainability measures seeking to reduce reliance on private transport and mitigate the potential impact of the development on the highway network and local area in general.

16.6 Design, Orientation etc.

In terms of sustainability, the opportunity to maintain a beneficial use for the existing super hangar at the site at the heart of the new development is to be welcomed.

In addition, to this, it is clear from the submitted master plans that considerable care and attention has been paid to the orientations, layouts and locations of the buildings within the development site, such matters having been considered not only on their functionality in terms of their use, but also the opportunities for enhancing the sustainability of the development through passive design solutions.

Clearly, such matters will be controlled at detailed design stage, but the master planning process, and detailed submissions in the Design and Access Statement and Sustainability Statements, have provided clear evidence that such matters will contribute to the achievement of the 'excellent' BREEAM rating for new buildings. The requirement to meet this rating will be conditioned.

16.7 Low and Zero Carbon choices including Energy Centre

The applicants have carried out a detailed review of a range of low and zero carbon energy sources to supply a proportion of the development's delivered energy requirement, whilst considering the technical, planning and financial issues. Their findings indicate that a Biomass CHP energy centre is the most viable solution for the DTC St Athan development, with other discounted technologies being: -

- Conventional gas and grid
- Waste to Energy Incineration
- Pyrolysis CHP
- Aberthaw Power Station – Waste Heat Recovery

In examining these discounted options, it is notable that the option of utilising the recovery of waste heat from **Aberthaw Power Station** has not been chosen due to the long-term uncertainty over the future and security of supplies, such matters being outside of the applicants control, rather than any obvious technical or costs difficulties associated with such a proposal.

This is regrettable, given that the submissions actually indicate that the waste heat – currently rejected to atmosphere – could be harnessed as a “very simple energy solution”, with hot water from the power station piped to the site, and exchanged into heat and circulated around the DTC site. It is also acknowledged that there are substantial environmental advantages as the heat is technically available as it would otherwise be vented to atmosphere.

Nevertheless, the applicants have investigated the option and, while these advantages are clear. There is also an acceptance by your officers that the need for long-term stability of supply throughout the operational life of the DTC is of paramount importance, not least because the long-term sustainability of the site as a whole could be compromised were Aberthaw to close or restrict such supplies. Due to these long-term uncertainties, and the need to secure the long-term sustainability credentials of the development, the discounting of this option is, therefore, accepted.

Notwithstanding the above, the benefits of the choice of an on-site biomass CHP plant/ energy centre remain clear, with the energy derived from this central source delivering heating, hot water and electricity to support the training function of the DTC. In this respect the submissions advise that the CHP Energy Centre will have a predicted reduction of carbon emissions from 17,857 tonnes CO₂ to 10,714 tonnes CO₂ or a 60% reduction in carbon emissions (note, this actually equates to a 40% reduction).

The impact of such an energy centre on the locality, transport and wider visual and residential amenities is considered in greater detail later in the report. Nevertheless, in general terms its provision is welcomed, and considered to be integral to the sustainability of the scheme as a whole.

It is nevertheless regrettable at this stage that the option of extending the district heating network to service other parts of the development such as the SFA (at least in the western part of the site) has not been confirmed, although it is acknowledged that the SFA will, nevertheless, be constructed to standards (CSH level 4) higher than current national guidance.

Although outside the scope of this application, the energy centre / district heating network will also not be utilised for the Aerospace Business Park's needs due, it is stated, to the significant disruption in installing the network under the main runway, to link ABP North and ABP South and the high initial capital costs (around £1,000/m of network). These, combined with the proposed phasing of the development / uncertainty over the buildings' end-users, mean that the demand for heat may not be sufficient to justify such a significant investment. In this respect, the ABP applicants consider a more viable option may be to use smaller, localised heat mains serving small clusters of buildings without requiring extensive distribution networks, which is considered to address the failure to adopt such a facility/ network at this stage.

The positioning of the energy centre centrally within the overall development area, close to the super hangar, also allows such possibilities, while its proximity to the leisure facilities, which clearly would (and must) be a building/ facility where such CHP/ waste heat must be utilised, is also considered to be entirely appropriate.

Accordingly, it is considered entirely appropriate that a condition is imposed requiring full details of the proposed District Heating Network, and analysis of CO₂ reductions attributable to the energy choices made on a whole development basis.

16.8 Other Low and Zero Carbon Energy Choices

As detailed above, the submissions indicate the choice of a single energy solution, rather than the adoption of a number of technologies to match the needs / building types on the site. The energy choices have been the subject of analysis in the Sustainability and Energy statement submitted with the application which discounting energy options such as ground sourced heat pumps, PV Cells, wind power, and solar thermal collectors on grounds including cost, safety and practicality.

The discounting of these other LZC options as part of the overall scheme is regrettable, as is the reliance on a single source. Nevertheless, it is noted that they propose 'Zero Carbon Electricity' to be provided to each SFA dwelling via a roof-mounted grid connected photovoltaic (PV) array (0.25kW_{peak} to 1.0kW_{peak} depending on house type). This approach in ensuring sustainable electricity to each and every unit of SFA is welcomed.

16.9 Sustainable Buildings

Although dealt with in the SFA section of this report below, it is notable that the SFA will be built to Code Level 4 of the Code for Sustainable Homes. This is welcomed as it exceeds the requirements contained within the recently published Ministerial Interim Planning Policy Statement (MIPPS) 01/2009 on Planning for Sustainable Buildings which took effect from September 2009.

The achievement of Code Level 4 demands a significant improvement over a 'standard' house built purely to comply with Building Regulations, most notably in terms of reduced energy consumption (minimum 44% energy performance improvement), carbon dioxide emissions, and water consumption.

In addition, there is a commitment for all new buildings to achieve a bespoke BREEAM 'excellent' rating, and *Very Good* for all refurbished buildings, which is both commended and necessary for a development of this magnitude. A requirement for post-construction assessments to demonstrate that the buildings achieve such standards is likely to be imposed at reserved matters stage.

16.10 Waste Management

Policy 13 of the UDP favours development which encourage sustainable principles for waste disposal based on a hierarchical approach of (i) waste minimisation / avoidance; (ii) re-use of water; (iii) waste re-cycling or recovery (including waste conversion to energy); and (iv) waste disposal landfill with minimal environmental impact.

The application has been accompanied by a Waste Management Strategy which has the stated aim of "working towards Zero-to-Landfill with a Total Waste Management Approach", which is to be positively encouraged.

The submissions identify the main waste producers/ streams (catering waste, accommodation waste, training waste, general site waste) and seeks to implement a total waste management approach through initiatives such as:-

- Encouraging re-cycling at source
- Colour-coding waste recycling collection points (for clarity and consistency)
- Continuous waste collection
- Provision of information for site users relating to what happens to their waste and how much has been recycled.
- Encouraging recycling of waste within SFA by providing each property with dedicated internal and external areas for recyclable waste, and composting of biodegradable waste.

EAW advises that they support the level of consideration and detail given to the waste strategy, and support and commend the aim of achieving 80% recycling of waste generated through core activities (not including SFA waste). They also support the design of the SFA to enable source segregated waste collection.

They note that the strategy does not include food waste, despite the food waste collection scheme pilot being rolled out in the Vale of Glamorgan, and a requirement from WAG for all local authorities to divert food waste from landfill to Anaerobic Digestion facilities by 2012. They therefore advise that the future demand for the ability to store source segregated food waste be recognised within the design of the accommodation.

Whilst fully supporting the aim to achieve waste recycling and appropriate containment, they also recommend that the strategy be considered under an ecological footprint assessment, whereby the contribution of the vehicles, infrastructure are taken into account when determining the environmental impact. When detailing where waste will be taken after collection, several streams are taken to non-specified facilities. The facility and mode of transport should be chosen through an assessment of the whole environmental impact.

This has been considered by the Council's waste management team, who have concluded that overall the Strategy provides a good control and operational methodology for basic waste recycling and general details of disposal for other wastes. However, they note that little consideration is given to address all the wastes that will be produced in line with the waste hierarchy and the proposed WAG "Towards Zero Waste" future Wales waste strategy. They therefore wish to see more certainty of what waste will be produced and how it will be dealt with in accordance with existing legislation and future waste policies. This can be adequately controlled by the need for amendments to their waste strategy, which will also require full details of the phasing for provision of the key elements of such a strategy on site (which should be before opening of the facility/ occupation of the accommodation).

17. ENVIRONMENTAL IMPACTS

In order for the environmental impact of the development proposed (both the DTC and the ABP) to be properly assessed, a scoping exercise was undertaken by the applicants agents prior to the preparation of a joint Environmental Impact Assessment (EIA). The potential significant effects identified during the EIA scoping exercise have been subject to 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, and the Council's EHO (Pollution Control) has raised no concerns in this respect.

It is clear from the nature of the proposals, from the submitted Environmental statement, and from the representations received from local Community Councils and local residents, that the potential environmental impacts of the development are a significant issue which requires addressing in detail.

From the representations, the key issues surround the potential impacts relating to noise and vibration, odour, and impacts on air quality. The particular areas of concern relate to the impacts of various elements of the proposal such as the impact of the Northern Access Road (particularly in respect of noise from construction and operational traffic) air quality, odour, noise and vibration, with such concerns being expressed in relation to specific elements of the proposals, most notably the field training areas and the impacts of the NAR

The submitted Environmental Statement has provided an in-depth analysis of the impacts in respect of each of these matters, together with many other construction and operational matters of note, with the ES forming the basis of the Council's consideration of the proposals, and in this respect it is noteworthy that the Council's Environmental Health Officer (EHO) has expressed satisfaction with the ES and has raised no objections subject to imposition of a number of detailed conditions to mitigate against such identified impacts.

The potential environmental impacts are thus addressed in detail in turn below, paying due regard to the requirements of national policy (such as TAN 11 – Noise) and Policies ENV 29 , EMP 2 and EMP 5 (amongst others), which require that development has no unacceptable environmental impact.

17.1 Air Quality

The submitted Environmental statement states the DTC development could affect air quality around the site or in its vicinity, through the increase in traffic on the local roads in the area, which could lead to an increase in pollutant concentrations associated with vehicle exhaust emissions. It also recognises that dust associated with the demolition and construction activities for the proposed development and the pollutants associated with the biomass combined heat and power (CHP) facility as part of the proposed development, could also affect air quality in the local area.

In this regard consideration should be given to an assessment of the magnitude and significance of these potential effects.

17.1.1 Baseline Assessment

A survey was undertaken from August 2007 to August 2008 to establish the baseline concentrations of NO₂ (Nitrogen Dioxide) in the area at present. The monitoring results indicated that air quality in the area surrounding the site does not exceed the Air Quality Objectives (AQOs) for the area.

17.1.2 Future Baseline

The ES states that there are no plans for other developments in the area which could significantly alter the air quality in the area. It notes that improvements in vehicle engine technology are expected to result in lower emissions of pollutants from vehicles in the future, which should help to improve air quality, as emissions from road vehicles have been found to be one of the main sources of air pollutants in the UK.

17.1.3 Scope of the Assessment

This section details the approach made within the ES to identifying receptors that could be significantly affected as a consequence of the development and highlights the final list of receptors taken forward for further consideration.

Human receptors taken forward for assessment are those which are considered to be most representative of the locations which are likely to experience the greatest change in pollutant concentrations as a result of the development, in relation to road traffic. These receptors are shown below.



Figure 18: Air Quality Receptor Locations

Receptors which could be affected by the increase in **traffic**, resulting in an increase in the concentrations of NO₂ and PM₁₀ (particulate) associated with the development, are likely to be those residential receptors and designated ecological sites which are located close to a road which would be used to access the development. If planning permission is approved for the DTC, it is acknowledged that the new residents located within the development (SFA and SLA) will also become receptors as they would be situated close to the roads surrounding and serving the new development. The receptors taken forward for assessment relates to existing residents in the local area within 200m of the roads which provide access to the site and future residents and businesses of the proposed development.

Receptors which could be affected by the pollutants from the stack of **the biomass CHP plant** are likely to be those residential receptors and designated ecological receptors in the local area surrounding the site. This would include the new residential accommodation on and offsite. The local area is considered to be within 10 km of the stack, as this is the area which is considered as most likely to be affected by emissions from the stack.

Dust associated with the demolition and construction activities on-site could affect those human receptors located on the edge of the site boundary close to the construction and demolition activities.

17.1.4 Likely Significant Effects

The likely significant effects of the development, which are subject to further assessment are:

1. Road Traffic: As there are planned new roads and junction improvements associated with the development and the development is likely to lead to an increase in road traffic on the existing roads in the local area, emissions from road traffic in the area could also increase. This could have an adverse effect on the air quality at the identified receptors;
2. Biomass CHP plant: There could be potential effects from the biomass CHP plant which is to be installed on the site as a result of the pollutants from the stack of the plant;
3. Construction Dust: Dust associated with the demolition and construction activities onsite could affect those receptors located on the edge of the site boundary close to the construction and demolition activities.

The ES states that construction traffic is not likely to have significant effect on air quality over the duration of the construction period. Construction traffic levels are stated as being expected to peak in the 3rd quarter of 2012 with an additional 1270 vehicles per day visiting the site, on average. This includes the workforce, visitors to the site and the vehicles which would bring supplies and take away waste from the site.

17.1.5 Assessment of Effects

Road Traffic

The ES states that no formal guidance exists for classifying the magnitude and significance of air quality effects although several documents, including technical guidance issued by the National Society for Clean Air (NSCA -now known as Air Quality Protection UK)¹⁷, suggest ways to address this issue. The magnitude of change is a term used to describe the change in pollutant concentration likely to arise with the proposed development,

The significance of a change in pollutant concentration is based not only on the magnitude of the change but also in relation to the attributed sensitivity and the number of people exposed to the changes. The sensitivity of a receptor is based on how close pollutant concentrations are to the relevant AQS, with the highest sensitivity being attributed to those receptors with existing air quality problems,

The Design Manual for Roads and Bridges (DMRB) model has predicted NO₂ and PM₁₀ concentrations for 2014 and 2028 with the St Athan development at the operational stage. The ES states that the predicted concentrations are below the relevant Air Quality Objectives (AQOs) at chosen receptor locations. The results of the assessment are presented in Appendix S in Volume 2 of this ES.

Based on the DMRB assessment the proposal is likely to result in moderately adverse effects on air quality in 2014 and 2028 at some of the receptors, mostly those which are located close to the new access road. Although it should be noted that the air quality objectives are unlikely to be exceeded, as the predicted concentrations at these receptors are still predicted to be considerably below the objective value, at less than 75%. These effects are therefore not considered to be significant. In addition the junction improvements at Waycock Cross junction result in moderately beneficial effects at the modelled receptors located close to this junction. The air quality objectives at this junction are also predicted as unlikely to be exceeded.

Biomass CHP Plant

The methodology in Local Authority Air Quality Management, Technical Guidance 2009(LAQM TG 09) has been followed to identify whether the emissions from the biomass CHP plant are likely to be significant. The methodology requires the calculation of the emissions from the biomass CHP plant which will exceed a threshold value which has been calculated using the Detailed Dispersion Model, ADMS, by Defra.

The assessment of the emissions from the biomass CHP plant found that these were below the threshold level for PM₁₀, PM_{2.5} and NO_x (nitrogen oxide). This suggests that there are unlikely to be significant air quality effects associated with the biomass CHP plant at human or designated ecological receptors within the local area. Full details of the assessment is shown in Appendix R in Volume 2 of the ES.

Dust

Guidance in respect of the sensitivity of potential dust sensitive receptors is taken from “The Environmental Effects of Surface Mineral Workings” prepared by Ove Arup, also included in Minerals Policy Statement 2.

The potential for dust emission and dispersal is predominantly influenced by prevailing meteorological conditions. There are various meteorological parameters which must be considered in order to assess the extent of dust generation and dispersal at a particular site and what, if any effects these will have on any sensitive receptor.

The prevailing wind direction is predominantly westerly with some easterly components, based on 5 years of meteorological data (2004 – 2008). The receptors most likely to be affected are therefore mainly located to the east of the site. In addition some of the locations are also within 200m of the site boundary.

The following residential roads have been identified as most likely to experience effects associated with the construction work onsite, as they are to the east of the site and within 200m of the site boundary:

- Cowbridge Road;
- Mallory Close;
- Clive Road;
- Flemingston Close;
- Aled Way; and
- Clwyd Way.

Residential properties in Eglwys Brewis may also be affected by dust from the construction activities on site, although most properties are not to the east of the main construction area. In addition properties close to the location of the new road (Rose Cottage and Froglands Farm) could be affected by dust associated with the construction of the new road. The above receptors would be considered as having medium sensitivity. The ES states that as there will be appropriate mitigation measures employed as part of the construction management plan, the magnitude of the effect is unlikely to be more than low. The effect of dust from construction is therefore not considered to be significant. The assessment of significance is based on the criteria in Tables 14.8 and 14.9 of the ES.

17.1.6 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.

17.1.7 Conclusion

In conclusion, 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.

With regard to wider air quality issues, the Councils Environmental Health (Pollution Control) officer considers that these issues are adequately addressed and that no significant impacts will arise as a result of the development, in that there is no predicted breach of the relevant air quality standards as predicted in the conclusion of the submitted ES.

The Councils Environmental Health Officers do however confirm that the operation of a biomass plant at the energy centre would require an independent permit (issued under the Environmental Permitting Regulations) before beneficial use and that the issue of a permit would only be acceptable if there is no adverse impact upon the locality.

However, with specific regard the construction stage of the development the Councils Environmental Health officers have recommended a condition whereby noisy construction work would be restricted between 08:00 – 18:00 (Mon – Friday), 08:00 – 13:00 (Saturdays) and none on Sundays / Bank Holidays. As intimated it is stated that such restrictions should only apply to “noisy elements” of construction rather than entire operations and can vary depending upon circumstances and proximity of sensitive receptors. They also advise that dust generated during this phase including haul routes will require control. Any mobile

crushing or screening plant must be operated subject to the requirements of a Permit issued under the Environmental permitting Regulations.

It is recommended that prior to the commencement of the demolition and construction phases a Noise, Vibration & Dust Management Plan must be submitted to the local planning authority for approval and this constitutes one of your officers recommended conditions (as part of the required Construction Environmental Management Plan) , which will also require agreement on hours of working.

17.2 Odour

By way of background, odour emissions from all sources are covered by the Environmental Protection Act 1990 in relation to statutory nuisance. This document states that in defense of statutory nuisance, an operator must demonstrate that an odour emitting source must conform with best practicable means (BPM) for prevention of odour emission. Best practicable means will be assessed upon the current state of technical knowledge and financial implications of potential mitigation methods.

Planning Policy Wales indicates that odour is a material consideration in the granting of planning permission and that the Local Planning Agency must be satisfied that any remaining pollution concerns are capable of being dealt with.

17.2.1 Baseline Assessment

The odour baseline for and surrounding the site is mainly influenced by the current aircraft activity at St Athan, specifically as a result of the combustion of aviation fuel by aircraft. The ES states that there have been no previous complaints associated with odour as a result of the historical operation of the site. However the Council's Environmental Health officers have confirmed that complaints have been made in respect of engine testing.

17.2.2 Off site issues

The current odour baseline at and surrounding the Llantwit Major Waste water Treatment Works (WwTW) is 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.

17.2.3 Future Baseline

The ES states that there are no plans for other development in the area which could significantly alter the odour effect upon local receptors. The future baseline without development scenarios would be altered by the changing use of the St Athan development site. In this regard even without the ABP and DTC developments it is proposed that the number of aircraft movements will increase at the former RAF St Athan.

17.2.4 Scope of the Assessment and Assessment of Likely Significant Effects

The ES states that the effect of tank running at former RAF St Athan is not considered to be significant. Given that tanks are powered by diesel fuel rather than aviation fuel, it is not expected that an odour problem will be caused by their use. Moreover, as the number of movements is likely to be small, it is unlikely that an odour annoyance will be caused by Tanks at receptor locations.

In the case of the existing Llantwit Major WwTW, emissions of odour associated with the proposed development necessary at the Llantwit Major WwTW are likely to affect receptors close to the site boundary. The effect of an increasing odour impact at receptors close to the Llantwit major site is dependent on the scale and type of the development proposed at the WwTW.

Notwithstanding the above, the ES states that the proposed development at Llantwit Major Waste water Treatment Works is predicted to have a beneficial effect on odour concentrations within the vicinity of the site. It is predicted that none of the sensitive receptors considered in the assessment will experience significant odour effects according to the significance criterion adopted in this assessment as a cause of the Llantwit Major WwTW. This is the conclusion of this assessment that an odour annoyance is unlikely to occur for this scenario. Further to the above it is also relevant to note that while these works may become necessary due to the current applications, they will not require the benefit of planning permission and are not under consideration as part of these proposals.

17.2.5 Conclusion

With regard to odour issues the Council's Environmental Health (Pollution Control) officers have not raised an objection, on the assumption that that engine testing would only take place within the ABP.

The ES details the environmental measures, (which should be submitted by way of condition), which would be implemented at the Llantwit Major WwTW.

17.3 Noise and Vibration

It is acknowledged that the proposed development will lead to changes, both positive and negative, in the noise environment and will introduce some new noise sources into the local area which should be assessed with regard to the magnitude and significance of these effects

17.3.1 Baseline Assessment

Baseline information was collected by means of a series of noise surveys, the methodology for which was developed in consultation with the Council's Environmental Health officers (Pollution Control). 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.

17.3.2 Future Baseline

The two key elements which may change baseline noise levels between the current and future baselines relate to the airfield activities and road traffic.

Data has been provided by the Welsh Assembly Government regarding future baseline airfield activity at St. Athan in the absence of ABP and DTC consents. It is understood that the Welsh Assembly Government has applied the following assumptions when forecasting future baselines:

- Current existing use of the site will continue (i.e. airfield use, aircraft maintenance, military usage and aircraft engine running);
- Welsh Assembly Government would continue to market the site and look for inward investment in terms of demand and the continued permitted use of existing buildings and hangars;
- No new buildings would be constructed for aerospace use other than a limited number of replacement buildings in need of substantial refurbishment and some requiring minor alterations;
- Both the existing Super Hangar and Twin Peaks hangar would revert to Welsh Assembly Government control for aerospace use under existing legal agreements;
- VC10 Aircraft will cease activity by 2014, having reached their out of service date; and
- It is also assumed that military flying school and Volunteer Gliding activity will continue at current activity levels.

In terms of existing operations, at present existing air movements amount to 15100 per year as set out in Appendix X of the ES. Existing operations include a series of uses from a range of aircraft and helicopters.

Other visiting aircraft including helicopters and fixed-wing aircraft are predicted to continue at existing 2007/8 levels. It is also predicted that small turbo-props, small props, military fixed wing and helicopter aircraft, and other jets would continue to occur at 2007/8 levels. Future military helicopter movements are predicted to be in the order of 160 movements per annum, all during daytime hours. Future fixed wing movements will be approximately 110 aircraft movements per annum with an estimated 98 movements occurring during the day and 12 during the night.

In brief, the information provided by the Welsh Assembly Government indicates that additional aircraft activity would occur above existing levels in the future. Future activities can be split into three sections; aircraft recycling, maintenance and general aviation.

- ABP Phase 1 in 2014, approximately 16,000 aircraft could be accommodated
- ABP Phase 2 in 2020, around 17,000 aircraft movement would occur in total
- ABP Phase 3 in 2028, around 17,300

Aircraft recycling is predicted to be predominantly focussed on the Boeing 737, occurring in daytime working hours, with recycling occurring in existing buildings. Approximately 4 movements associated with aircraft recycling would occur per annum.

The ES states that The Welsh Assembly Government believes aircraft maintenance would occur on the site and would contribute to additional aircraft movements. The maintenance activities would occur for the following: base maintenance (Boeing 737 type aircraft), business jets and turboprops, regional jets; and helicopters. It is also predicted that additional general aviation would occur and it is envisaged that this will increase.

In the absence of ABP consent, there will be extensive existing facilities for Maintenance, Repair and Overhaul (MRO) of aircraft including Twin Peaks and the Super Hangar as well as other older hangars on parts of both West and East Camps, including engine running.

In April 2009 the Welsh Assembly Government issued through their noise consultants, forecasts for the number of aircraft running checks that would occur in the absence of ABP consent for the three phased design years of the development. The Welsh Assembly Government has identified that, in the absence of ABP consent, the MRO test facility would be located to the east of the disused cross runway at the current location of the VC10 engine running. It is predicted that it would be used for large aircraft engine running (including commercial / regional jets). The Welsh Assembly Government also confirmed that engine running of small rotary aircraft and helicopters would occur at the existing Harrier tie-down to the south of the disused cross runway. For both engine running locations, no specific noise screening is proposed for the MRO, although the existing Harrier tie-down area is currently surrounded on three sides by a grass bund. Data regarding the nature and duration of the number of engine tests that are predicted to occur at the MRO can be found in Appendix Y of the ES.

In terms of road traffic, the absence of the proposed development, future road traffic noise levels are expected to increase slightly. The baseline road traffic noise levels in the opening year, 2014, are predicted to increase between 0 and 2dB(A). For the future baseline year, 2028, road traffic noise levels are expected to increase by up to 3dB(A) when compared with the current baseline.

17.3.3 Likely Significant Effects of the Development

Potentially significant noise and/or vibration effects could result from the construction and/or operation of many of the different land uses proposed as part of the development. Further detail on each land use is provided below.

Construction

Increases in ambient noise and vibration levels during the construction period have the potential to affect the amenity of existing noise sensitive receptors and have the potential to affect the amenity of occupants of early phases of the development.

Core Site Activities

Increases in ambient noise levels due to DTC training activities during the daytime could affect the amenity of existing and future noise sensitive receptors. No DTC training activities will occur during the night-time period. Therefore a change in night-time noise levels is not expected to occur as a result of the development.

Field Training and External Training Areas

Increases in ambient noise from service personnel using Picketston Field Training Area for ambush demonstrations may affect the amenity of existing receptors and future site occupiers, particularly Picketston SFA and Picketston village;

Furthermore increases in ambient noise from service personnel using Picketston firing range may affect the amenity of existing receptors and future site occupiers particularly Picketston SFA and Picketston village;

The same applies to the Castleton FTA, with increases in ambient noise from service personnel using Castleton External FTA which may affect the amenity of existing receptors and future site occupiers, particularly those in Castleton (including the SFA), and Flemingston Road Housing Estate.

The following increase in ambient noise levels at the following sites is not considered to result in significant noise effects.

- Potential Artificers Assessment Board (PAAB)activities – On the basis that the area is proposed to be used 10 times a year, for 3 days at a time. In addition, a 3m high acoustic fence is proposed to be erected between this area and the nearest residential properties at Picketston. The fence is intended to screen noise from the FTA and firing range but will have the additional benefit of screening any potential noise from the PAAB area.
- Use of obstacle course – Like the PAAB . The 3m high acoustic fence proposed at Picketston will ensure any noise that is generated is screened;
- Use of Aerial Farm/Field – used to train service personnel how to erect aerials for communication.
- Use of Hilo Pole Field – This area consists of several telegraph poles which trainees will scale to attach and detach communication cables. The work is similar to that of a telephone engineer. It is not considered to be a noisy activity.

- Castleton External Field Training Area – This large and open area will be used for non-noisy activities such as camping, crawling, running, hiding, etc. Wheeled vehicles such as Land Rovers may also be used. The ES states that no firing or use of thunder flashes will occur.

Road Traffic

Increases in ambient noise caused by additional development related traffic on existing roads affecting the amenity of existing receptors in close proximity to routes predicted to experience a noticeable change in traffic flows and increases in ambient noise from traffic on new development roads affecting the amenity of existing and future site occupiers in close proximity.

Industrial Sources

Increases in ambient noise due to activities at the MT Workshop, Wash Down and White Fleet, may have the potential to affect the amenity of nearby existing noise sensitive receptors (approximately 180m to the north east);

Likewise increases in ambient noise due to activities at the Waste Compound may have the potential to affect the amenity of nearby existing noise sensitive receptors (e.g. Ashdene, approximately 150m to the north).

Improvements to Llantwit Major WwTW are not considered to result in significant noise. Likewise mechanical and electrical services incorporated into the development are not considered to lead to significant noise effects. The same conclusion applies to activities at storage facilities including the RID and the Energy Centre with noise emissions from such sources not being expected to exceed background noise levels at the nearest receptors.

Future Site Occupants

Potential cumulative effect on future site occupants, due to elevated ambient noise levels (operational noise levels generated by the proposed development combined with existing noise sources).

Cumulative Effects

Total increase in ambient noise from all sources described above has the potential to affect the amenity of existing noise sensitive receptors.

Road Traffic

DMRB recommends that the magnitude of noise impact should be categorised and provides the following example classification of noise magnitude impacts. Table 16.17 of the ES summarises the DMRB classification of magnitude of noise impacts.

A summary of the noise magnitude criteria used in this assessment is shown in Table 16.21 of the ES

17.3.4 Assessment of Effects

The determination of significance within the ES is largely based on magnitude. The determination of significance in the ES is based on the sensitivity of a particular receptor (which depends on local circumstances and the type of receptor), as well as the magnitude of change in noise levels (which is related to existing background or ambient noise levels and predicted noise levels due to the development). The actual noise level (i.e. the predicted future noise level) would also influence the determination of significance, since it may either exceed or comply with relevant guideline noise limits, irrespective of the amount of change predicted.

Noise Sensitivity

TAN 11 focuses on residential properties as being noise sensitive, although it does cite developments such as offices, hospitals and schools as containing buildings and activities that are potentially noise sensitive.

For the purposes of the noise assessment, residential properties (both existing and proposed) would be considered to be of medium sensitivity. Future occupants of the proposed hotel have also been assigned a sensitivity of medium. Many commercial and industrial premises would normally be considered to be of a low sensitivity. Whilst the occupants of existing and proposed offices are considered to be less sensitive than typical residential properties, a sensitivity of 'medium-low' has been assigned to recognise the requirement that occupants would require suitable conditions to undertake work requiring concentration. The existing St Brise Church yard, along with the proposed Ghurkha temple, Church and World Faith Centre have been assigned a medium sensitivity, although this would only apply to specific daytime periods. Staff and pupils of local schools, the DTC and the crèche would also be considered to be of medium sensitivity, although this would only apply during school/teaching hours. In-patients of the medical and dental centres are considered to be of high sensitivity, due to evidence that those with poor health are more vulnerable to noise effects.

The magnitude of effect has been based on the noise predictions that have been undertaken. However, since the noise predictions have been based on worst-case assumptions, it would be inappropriate to conclude that a high magnitude has arisen simply because the relevant noise limits have been predicted to be breached. The amount by which the limits are predicted to be breached, along with the duration of the effect should also be taken into account. The apportionment of a magnitude rating has therefore taken this situation into account by applying an element of professional judgment

The predicted future baseline takes into account the future changes in activity (both on and off site) which would occur in the absence of the development and which can be reasonably anticipated based on current knowledge. These changes are principally associated with on-site airfield uses and road traffic and are therefore discussed in more detail in section 16.9 and 16.11 of the ES.

Construction

The determination of magnitude of effect for construction noise and vibration is based upon guidance presented in BS5228. This document presents examples for the derivation of construction noise and vibration limits. As detailed in section 16.5 of the ES, noise and vibration limits for the project will be agreed with the Council's Pollution Control officers by way of a Noise Management Plan.

Construction activities, whilst temporary in nature, will take place at certain times over a protracted period (2009-2028), (when including ABP) due to the size and complexity of the proposals. The works will comprise numerous different activities at both the main development site, and other satellite sites. Construction activities will not occur in close proximity to any particular receptor for long periods of time.

The ES advises that best practice measures will be used to control and manage construction noise and vibration emissions and their effects on existing noise sensitive receptors and future site occupants. These are as follows:

- Standard Measures to Reduce Noise Levels at Source – The ES states that construction plant equipment would be modern machinery to minimise noise generated during operations. Plant would also be properly maintained in accordance with the manufacturers' instructions to ensure that the occurrence of malfunctions that could give rise to elevated noise levels is reduced, and any malfunctions that do occur are swiftly repaired. 'Smart', warbling or broadband reversing alarms would also be fitted to all key mobile plant to reduce the intrusive nature of such sources. All machinery would be switched off or throttled down when not in use, with silencers fitted where noisy machines are required to be used in close proximity to sensitive receptors.
- Barrier Attenuation –The majority of the development buildings proposed as part of the DTC are sited over 100m from the site boundary (for security purposes). The EA states that acoustic barriers at the site boundary would therefore not be needed for the majority of construction works in this area. However in specific instances where continuous noise (from DTC or other construction activities) is envisaged close to sensitive receptors, then consideration will be given to the use of temporary acoustic hoardings or baffle mounds if appropriate.
- Noise Management Plan - The ES states that a Noise Management Plan (NMP) would be submitted to Vale of Glamorgan Council, prior to the commencement of any works on-site. This would detail the locations, frequency and methodology of the routine noise monitoring which would be undertaken by the construction contractors throughout the construction period. It would also present construction noise and vibration limits derived from guidance presented in BS5228. The actions to be undertaken in the event of a breach of the relevant limits will be detailed in that plan, or would be required as a consequence of that plan.

- Limitations to Hours of Operations – It is stated within the ES that full construction operations would be restricted to 0700-1900 hrs on weekdays and Saturdays. Moreover, particularly noisy construction operations, generating high levels of noise at sensitive receptors, would be further restricted to 0800-1700hrs on a weekday and 0800-1300hrs on a Saturday only. Only non-noise generating works (such as routine maintenance or works within buildings) would be carried out on Sundays. Any operations to be carried out outside of these hours, would require prior consultation with both the Council and the local community.
- Location of Plant Items – Whilst it is acknowledged that many of the noise sources would move location within and between the phases of the construction programme, it is stated that certain plant items will remain relatively static, such as generators, compressors and pumps, which it is stated will be sited in order to minimise the noise effects on sensitive receptors.
- The site would be registered with the Considerate Constructors Scheme, a Government endorsed scheme which encourages good practice on construction sites to comply with a Code of Practice. In addition to guidance on cleanliness, safety, responsibility and environmental issues, a specific commitment to keep noise from construction operations to a minimum at all times is included in the Code of Practice. Membership of this scheme (or similar scheme) ensures that noise and vibration effects during the construction phase would be effectively managed.

With reference to construction, and in summary, best practice measures will be used to ensure that noise and vibration levels are kept below the limits which will be detailed in the Noise Management Plan (NMP) which shall have been submitted to and agreed by the VoG POC prior to the commencement of the works. Noise (and where relevant vibration) limits for all construction works will be specified, including works on the main site (East Camp), ABP, SFA, Picketston, route of the new access road, locations for the road improvement works and route of the new rising main.

The ES states that noise and vibration levels at individual specific receptors are likely to be well below these limits for the majority of the construction period, although it is acknowledged that when activities are in closest proximity, noise and vibration levels may be close to these limits.

Core Site Activities

DTC Training activities are summarised in the submission as follows

- Flightline - located to the north of the runway on the disused cross runway. Military type aircraft taxiing and performing manoeuvres on a daily basis on the cross runway. It is anticipated that a detuner would also be used approximately once every two weeks;
- Tank pan - located south of the Super Hangar on an area of hard standing, where typically five tanks would perform manoeuvres such as turning and running up gears for up to an hour a day;

- Tank Road - running parallel and north of the main runway from the tank pan. It has been assumed that the tank road would be used once a day by a single tank performing a return journey along the road.

In terms of the assessment, these training activities are considered as new noise sources with respect to the baselines, despite these sources having similar characteristics to the noise emissions due to aircraft engine running which would occur in the vicinity of these proposed activities in the absence of the development.

Noise levels have been calculated for the duration of the DTC airfield training activity hours, taking into account the frequency and duration of the various activities and noise sources associated with DTC training. The determination of the magnitude of effect for the DTC training noise sources is based upon the approach outlined in BS4142, and used as described above for the ground noise and engine running noise assessments. In order to provide context to the assessment, the noise level at receptors during equivalent baseline years will also be considered as part of the assessment.

The ES states that noise levels due to DTC airfield training activities (including Flightline, tank road, tank pan and breakout from hangars) have been predicted at sensitive receptors surrounding the airfield. The core site receptors surrounding the site have been assessed and the noise level calculated during DTC airfield training activities is presented. Weekday average background noise levels are also presented along with the difference between the ambient noise level during training and the background noise level. The submissions present the likelihood of complaints due to DTC airfield training activities.

The data (section 16.7, table 16.3 of the ES) shows that for most of the core site receptors, the likelihood of complaints due to noise from DTC airfield training activities is either marginal or unlikely. In general, receptors to the far west of the airfield would be unlikely to complain whilst to the south and south-east at the village of St. Athan, the likelihood of complaints is marginal. To the north of the airfield at receptors in Picketston and Eglwys Brewis the assessment again shows that the likelihood of complaints is marginal.

The assessment shows that for the receptor at Batslays Farm, noise levels during DTC training would be more than 10dB(A) above background noise levels. This is due to unscreened propagation of noise from the military jet training and tank pan training to the north of the runway. Although background noise levels are exceeded by more than 10dB(A), it is nevertheless noted that throughout the training exercise, noise levels would be less than WHO guidelines.

In conclusion, for all core site receptors excluding Batslays Farm, according to the assessment methodology, a magnitude of low-medium may be assigned to these receptors. When combined with the medium sensitivity of these receptors, it is concluded that noise effects would not be significant. However for the receptor at Batslays Farm, a magnitude of 'high' has been assigned. When combined with the medium sensitivity of the receptors, it is concluded that noise effects would be significant in this particular instance.

Combined Core Site Activities (DTC & ABP)

Daytime noise levels due to combined core site activities for each year of the development in 2014, 2020 and 2028 have been calculated and are presented in Figures 16.18-16.20 of the ES. When reviewing each of the figures with respect to the equivalent future baseline cases, the following observations can be made:

- Relocation of the fixed wing and helicopter engine running to the purpose built facility in the Batslays area of the site;
- Introduction of DTC training activities on the cross-runway and tank pan,
- Utilisation of the southern taxiway due mainly to the relocation of University of Wales Air Squadron (UWAS) and Volunteer Gliding Squadron (VGS) and the relinquished use of the Super Hangar.

When considering changes in noise levels throughout each phase of the development, the figures show no meaningful changes in the location of the noise sources between 2020 and 2014 although increases in noise levels due to increased ATMs and increased engine running can be observed. When considering changes in noise level between 2020 and 2028, the figures show two noticeable changes as being the relocation of the visitors' helipad from north of the runway to the south and the relocation of UWAS and VGS from hangars south of the runway to hangars to the east of the airfield. When reviewing the Data, increasing noise emissions from the MRO engine running facility, aircraft taxiing, hold points and stands can also be observed

In terms of noise levels, the figures show that in general, noise levels between 2014 and 2020 would increase by around 1-3dB(A). Between 2020 and 2028, the table shows that noise levels would increase at most receptors however the increases appear to be specific to each receptor and not typical of increased core site activity. When considering noise levels due to core site activities, it is noted that noise levels at most receptors are less than 50dB(A). Like the noise levels observed for the predicted future baselines, the highest noise levels due to core site activities are stated to occur at Batslays Farm and Bingle Lane where noise levels are approximately 59dB(A) and 58dB(A) respectively. It is noted that otherwise most receptors would fall within the 55dB(A) WHO guidelines.

When considering the noise difference map for 2014, as stated above most locations surrounding the site would experience noise level increases of up to 3dB(A). When considering the noise difference map for 2020 this shows slightly more reductions in noise surrounding the site. When reviewing the detailed results of the noise models, it should be noted that at many locations, noise levels due to core site activities do not change. As such, small changes in buildings surrounding significant noise sources may result in the development introducing a small increase or reduction.

For all core site receptors to the north of the site, including Picketston and Eglwys Brewis noise levels due to core site activities would not increase, and may reduce as a result of the development, and as such a magnitude of 'low' has been assigned to these receptors. When combined with the medium sensitivity of the

receptors, it is concluded that noise effects due to core site activities are not significant.

For receptors to the east and north-east at Flemingston Village and Flemingston Road Housing Estate, for each of the three assessed years of development, changes in noise levels due to core site activities are predicted to be no greater than 3dB with noise effects due to core site activities are not significant.

For most receptors overlooking the site in St. Athan village, noise levels due to core site activities are predicted to increase by less than 6dB(A) as a result of the development. The noise difference map presented in the submissions (fig 16.23) shows that for some isolated properties on St. David's Crescent (4 No.) and St. John's View (4 No.), the development may introduce noise level increases of up to 9dB(A). On the basis that a magnitude of 'high' has been assigned, when combined with the medium sensitivity of the receptors, it is concluded that noise effects would be significant at 2028 following the relocation of UWAS and VGS.

For receptors overlooking the site on Llantwit Road, those to the east at Higher End would experience noise level differences in core site activities of no greater than 3dB(A). For those receptors to the west of Llantwit Road (including Briarbank) changes in core site activity noise levels as a result of the development are between 3-6dB(A) for 2014 and 2020.

At Batslays Farm and Seaview, Table 16.35 shows that noise levels due to core site activities would reduce as part of the development. The reduction in noise level would occur through all three assessment years and would be in the region of between 1-3dB(A) with respect to predicted future baselines. As a result, a magnitude of 'low' has been assigned to the receptor which when combined with the medium sensitivity of the receptor, it may be concluded that noise effects are not significant.

For Boverton Mill Farm, the noise difference maps and results presented in the submissions identify that noise levels due to core site activities would increase by 5-7dB(A) as a result of the development for the years 2014 through 2028. When considering the increases in noise level due to the development in 2014 and 2020 against the methodology set out in Section 16.7, a magnitude of 'medium' has been assigned. When combined with the medium sensitivity of the receptor, it may be concluded that for 2014 and 2020, noise effects due to the development are not significant. However, when considering the noise level changes due to the development in 2028, a magnitude of 'high' has been assigned to the receptor. When combined with the medium sensitivity of the receptor, it is concluded that noise effect due to the development would be significant over the long term.

For receptors to the west of the site, on the outskirts of Boverton, changes in core site activity noise levels as a result of the development would increase by no more than 6dB(A) throughout each of the assessed years. The results presented in Table 16.35 show that for the receptor to the south of Boverton, for 2014, core site activity noise levels would increase by less than 3dB(A) with respect to predicted future baselines. For 2020 and 2028, noise levels would increase by 3-4dB(A) as a result of the development. When considering these increases in noise level against the methodology set out in the submission it is concluded that noise effects would not be significant.

Field Training Area

Research by BRE and papers presented at the 1997 Institute of Acoustics (IOA) conference provide a basis for guidance on acceptable noise limits to be applied in the vicinity of residential premises. The BRE research suggests there is no fixed shooting noise level at which annoyance starts to occur, but mean shooting noise levels (mean SNLs) below 55dB(A) are less likely to result in annoyance and mean SNLs above 65dB(A) are highly likely to result in annoyance.

The BRE research indicated a need for further study of the effects of background noise on annoyance due to shooting. BRE found no effect from background noise; however, most of the measurements were undertaken in low background noise environments. Therefore, closer examination of sites with higher background noise levels was considered necessary in the ES before the role of background noise in relation to annoyance can be understood.

Clay Target Shooting

The ES states that limits set will be a matter for local negotiation, but should normally be set according to the guidelines. It is stated that the typical training day is from approximately 0830 to 1730 hours and that firing would generally not occur outside these times. There are some training objectives which involve blank and live firing which cannot be met during daylight hours. However, the occurrence of such training is stated as being infrequent, and would be undertaken before 2300 hours, wherever possible.

It is stated that the firing and field training area are likely to be used every day. The field training area will have limited amounts of actual firing as it is primarily being used for demonstrations. The EA does however acknowledge that the firing range will be utilised fairly intensively throughout the day and that planning permission is being sought for permanent use. The ES adds that the rate of fire will be low from the field training area (typically up to around 250 shots per day), while the rate of fire from the firing range is considered to be high, potentially up to 4000 shots a day, and around 500 shots per hour.

Considering all of the above, and in consultation with the PCO at VoGC, a noise limit of SNL 65dB is stated as being considered appropriate in the ES. The assessment of magnitude of effects is therefore based on this SNL 65dB limit.

The existing firing range at West Camp is used during the daytime, and the range was in normal use during the baseline monitoring period and hence some periods of firing were included. However, the surveys also include all other noise sources that were contributing to the ambient noise levels during the survey. The existing West Camp firing range is currently used by the occupants of West Camp and RAF personnel, as well as Cadets. The level of use is approximately 4 hours per week, with 2 hours at weekends by Cadets approximately once every 2 months. Typical use is for ten people to fire about 15 rounds over a half hour period. Weapons fired are SA80 rifles and 9mm pistols. The range is used between 10am and 5pm, with some firing up to 2300 hours in summer, though it is most often used in the afternoon. The ES states that should the proposed Picketston firing

range be built, the RAF and cadet use will cease at West Camp, with just the occupants of West Camp continuing to use it.

In respect of the Picketston Firing Range it is stated that the firing range will be used every day for most of the morning and afternoon, typically from around 0830 to 1630 hours, with 8 lanes which could be in use at any one time with 40 minute sessions using 40 rounds on each lane with firing during the hours of darkness, although less frequent using ten rounds only, on each lane. It is stated that where possible, firing during the hours of darkness will cease before 2300 hours.

The firing range will also be used for armament testing including 5.56mm minigun, and the larger calibre general purpose machine gun (GPMG) 7.62mm. These particular uses will be infrequent, possibly two or three times a month for half a day and would typically comprise four or five bursts per weapon. Entec has assumed similar noise data for the minigun as the SA80 rifle, both of which are 5.56mm, where the larger calibre GPMG is approximately 6dB(A) louder than the SA80.

The ES states that the firing range will be enclosed on all four sides with a 2m high solid fence all around the perimeter, and an 8.5m high bullet catcher wall in the direction of firing, which subtends 18m back (halfway) toward the shooters, to provide necessary screening from the firing noise occurring within the range.

Taking into account the medium sensitivity of all the receptors, and the low or medium magnitude of effects, the ES considers that there are no significant effects associated with noise from the proposed Picketston firing range. The noise predictions are based on the SA80 rifle being used in the range, as this is by far the most common firearm which will be in use. It is anticipated that during armament testing (typically just two or three times a month), noise levels could be 6dB higher than predicted and presented above. Therefore, it is acknowledged that there is the potential for a high magnitude of effect at New Barn to the north of the range when armament testing of higher calibre weapons occurs. However, given the infrequency of occurrence of the armament testing this is not considered to be a significant effect.

In respect of the Picketston Field Training Area (Ambush Training) the FTA would be used approximately between 0830 to 1730 hours on a typical training day, outside of which the use of firearms would not generally occur. The ES notes that there are some training objectives which involve blank firing of weapons which cannot be met during daylight hours, however occurrence of such training would be infrequent, and undertaken before 2300 hours where possible i.e. outside of the sensitive night-time period.

This area will mainly be used for ambush training comprising of noisy initial demonstrations followed by a period, described as a few hours of dry drills. Typically, there will be approximately eight demonstrations per day, each comprising of 16 students watching two Land Rovers being ambushed with one or two thunder flashes and sometimes, but not always, blank small arms fire from SA80 rifles comprising of potentially up to 30 rounds. Drills which involve the tasks and demonstrations without the blank firing or pyrotechnics, will reduce the potential for noise. It is stated that the field training area will be enclosed on all four sides with a combination of acoustic bunding and/or fencing. The noise model

assumes the provision of a 5m southern bund, 4m western bund and 3m northern and eastern bunds, with some additional baffle mounds within the main area. These will be incorporated into the training where appropriate, which will further screen noise levels from the training activities.

A 3m high acoustic fence will be erected at the eastern perimeter of the Picketston training area, separating the PAAB and the existing Picketston residential dwellings. This will provide additional screening from the field training area, firing range, PAAB and obstacle course. From the data, it can be observed that most of the predicted noise levels comply with the noise limit of SNL 65dB. However, New Barn, along with approximately eight other properties to the north, are predicted to experience noise levels in excess of 65dB. When this high magnitude of effect is considered alongside the medium sensitivity of these receptors, it has been determined that significant effects are likely at these properties. The conclusion of a significant effect at this location is considered to be appropriate.

At Carpenters Arms, it is predicted that the LAF max noise level is 66.4dB, one decibel above the guidance limit, and therefore a high magnitude effect. However, a difference of 1dB(A) is unlikely to be perceived by the majority of people. It would therefore be considered inappropriate to conclude significant effects for such a minor exceedance. In addition, as a public house affected by daytime noise, this is a low sensitivity receptor.

Further to the above regard must also be paid to the fact that the site is currently a military base and there are no controls over what can be done within the current boundaries, including filed training and small arm firing. Accordingly while it is important to ensure that proper controls are placed over the proposed activities, members should be aware that in the main these activities could be undertaken within the existing site with no control whatsoever.

Road Traffic Noise

The following highway works are proposed to serve both the DTC and ABP developments:

- Construction of a northern access road (NAR) from the B4265 to Eglwys Brewis Road, north of the ABP;
- Improvements to Eglwys Brewis Road leading to St Brise Church;
- Realignment of the highway and associated 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;
- Construction of a southern access road off the B4265 road (not in Phase 1); and
- Highway works and associated landscape planting at Waycock Cross road junction involving the provision of a new roundabout.

It is recognised in the findings of the ES that the development of both the DTC and ABP will introduce new traffic noise sources into the area, with the predicted traffic flows on existing and proposed new roads modelled and assessed. It is noted that most receptors will experience a slight increase in noise levels as activity at the site increases, although there are some decreases in noise level, mainly around the new southern access road, Gileston realignment and Waycock Cross.

The new southern access road, (which will not be completed until after 2014) to serve the ABP south and includes a realignment of the B4265 which will move traffic further north.

At Waycock Cross, it is suggested that there will be a reduction in vehicles, as well as a reduction in the percentage of heavy vehicles and speeds, in 2028, all of which contribute to a lower predicted noise level. At Gileston, there will be slightly increased vehicle numbers, but a reduction in the percentage of heavy vehicles and speeds, resulting in a lower overall noise level.

It is noted that predicted development related traffic noise levels for both 2014 and 2028 do not exceed 68dB LA10,18hr, at any of the selected noise sensitive receptor locations, and hence do not exceed the limits of the noise insulation regulations.

As shown illustrated in Table 16.43 of the ES, changes in noise levels due to the effects of the proposed development on road traffic flows vary considerably by location. In particular, receptors affected by changes in road traffic noise following construction of the new roads are considered to be most affected.

Road traffic noise effects are not expected to be significant at Monmouth Way and Harding Close, Boverton, Llantwit Road, West Camp and Batslays Farm, Sycamore Avenue, Eglwys Brewis (short term only) and at Lougher Place and St. Athan and Walters Farm, Waycock Cross.

Notably significant beneficial effects (reduced noise levels) are expected at Sea View, St. Athan, due to the expected reduction in vehicle speed using the adjacent stretch of B4265 in 2014, while in 2028, the new southern access road would result in realignment of the B4265 further north and away from the property. Moreover, the realignment of Waycock Cross roundabout further north will have a positive benefit to local receptors at Heol Sirhwi and Waycock Cross

In terms of the change in noise level due to road traffic noise increases, some receptors are expected to experience a significant effect, which is set in full in Table 16.43 of the ES. In brief those receptors include Great House Farm, Llanmaes, Rectory Road and Broadway Nursing Home, St. Athan and at Sycamore Avenue, Eglwys Brewis and other sites within Eglwys Brewis, Millands Caravan Park, and Picketston, due to the development of the new northern access route.

In summary the ES identifies that there are receptors where the noise effects from the combined core site activities of DTC and ABP would not be significant; being to the east and north east of Flemingston village and Flemingston Road Housing

Estate, at Picketston and Eglwys Brewis and to the east of the site on the outskirts of Boverton and to the south at Batslays Farm and Seaview. It is however, also acknowledged in the ES that there are receptor sites which are identified as having significant noise effects as a result of the combined core site activities, namely receptors overlooking the site in St. Athan Village and isolated properties on St. David's Crescent and St. Johns View and at Boverton Mill Farm. In this regard the Noise Management Plan, which will be required to be submitted by way of condition will provide full details of mitigation and limitations on the operations/activities in respect of the core site activities in order to mitigate the impact on the identified receptors.

Industrial Sources

The Mechanical Training Workshop and Waste Compound will only operate during daytime hours. Noise levels from activities at the Waste Compound and Mechanical Training Workshop have been predicted at the nearest sensitive receptor at Ashdene and New Barn Farm. The data submitted demonstrates that the likelihood of complaints from activities at the Waste Compound is marginal and potential effects of noise from this source will not be significant.

Complaints regarding the activities at the MT Workshop are considered unlikely as effects from this noise source will not be significant.

Future Site Occupants

In considering potential impact on existing receptors, consideration should also be given to the impact on the future occupants of the proposed DTC residential uses being the Single Living Accommodation (SLA) (Ranks Village) and for the proposed Services Family Accommodation (SFA).

As the SLA is expected to be unoccupied during the day, no consideration of daytime noise effects has been undertaken. Furthermore noise emissions for all on-site development related effects during the night-time period 2300- 0700hrs are expected to be minimal, and as there are no significant noise sources expected to be operational in the vicinity of the Ranks Village, it is assumed that night-time noise levels, would be dominated by road traffic, which is likely to be low in any event due to the distance between source and receptor.

Predicted future noise levels affecting the SFA residential areas were taken from the cumulative noise model for 2028.

In summary, all SFA areas fall either into Noise Exposure Category A, or Noise Exposure Category's B/C (medium magnitude of effect), where road traffic, airfield noise or any other noise sources associated with the development are considered to have a potential adverse effect upon residential amenity in the SFA areas. The ES states that this will be mitigated with adequate levels of noise reduction on the building façades to meet the internal noise level criteria of BS8233.

17.3.5 Summary of Predicted Effects and their Significance

Predicted cumulative noise levels in 2014 show a decrease (i.e. a beneficial effect) on the predicted baseline noise levels at 24 out of 49 receptors.

The noise level decreases suggest that, for the 2014 scenario, noise levels due to the development will, in general, decrease rather than increase in many residential areas, including the whole of St. Athan, much of eastern Llantwit Major, West Camp, Picketston and Eglwys Brewis. However, there are several receptors in these areas which are predicted to experience a noise level increase, albeit a non-significant increase. These receptors are mainly clustered around roads expected to experience a significant increase in road traffic volumes to 2014, particularly those located on or close to Eglwys Brewis Road. This effect is also seen at more isolated properties to the north of the airfield, e.g. Slade Paddocks (R34a) and New Barn (R34b) being two such examples due in the main to current baseline road traffic levels being very low at these properties.

Road traffic noise effects are acknowledged in the ES as being particularly pronounced at receptors located close to the new northern access route with significant effects predicted at receptors R26b (Froglands Farm) and R31b (Millands Farm Caravan Park) suggesting that existing residential properties located close to the new access road are likely to experience adverse noise effects, due to operation of the new route. It is concluded that changes in other noise sources will not mask these increases.

Other receptors in this vicinity either experience a decrease, or a non-significant increase, but these are generally located at a greater distance from the new access road. There is also a significant increase for 2014 at receptor R12d, (Picketston Close, Eglwys Brewis) due to road traffic increases on Eglwys Brewis road pushing the ambient noise level above 55dB LAeq, 16hr, with significant effects also expected at Briarbank (R5a), where noise level increases due to new airfield operations are particularly high.

Conversely, no significant effects are expected at Batslay's Farm (R4a/R4d), despite its proximity to the new engine running area. The relocation of other airfield activities, particularly the police helicopter landing zone actually produces a noise level decrease at this location. It should be noted that the new engine running area is oriented so that its noise barrier effectively reduces noise at Batslay's Farm.

In relation to the predicted effects in 2028, it is noted that fewer receptors in the area experience a decrease in noise level due to development than in the 2014 scenario. There are a greater number of receptors in eastern Llantwit Major where noise levels increase, but still below the threshold of significance.

Significant adverse effects are however predicted at Rectory Road and Broadway Nursing Home, St Athan (Receptors R6c and R6d) indicating that traffic volume increases through St. Athan may lead to significant noise level increases for both residential receptors close to the main road through St. Athan, and at the Nursing Home (particular given that this is a high sensitivity receptor).

Other receptors north of West Camp at Eagle Road and Carpenters Arms Public House (Receptors R26c and R33a), are also expected to experience significant increases in 2028 due to increases in traffic volumes on Eglwys Brewis Road, combining with noise from the new northern access road, and airfield activities. All areas expected to experience significant negative effects due to development in

2014 are also expected to experience significant adverse effects under the 2028 scenario, with the exception of Briarbank (R5a), where noise levels actually decrease with respect to baseline in 2028, due to the relocation of the gliding school away from this receptor in the 2028 scenario (a positive effect)

There are significant adverse effects at some properties in Picketston Close, on Eglwys Brewis Road (Receptors R12a / R12d) due to increase in ambient noise levels being pushed up over 55dB LAeq, 16hr. In the 2028 scenario, this effect also occurs at properties on the western boundary of the Flemingston Road Housing Estate (R8a and R8c).

The ES details the environmental measures, (which should be submitted by way of condition), which is set out in full in Table 16.61 of the ES. This table sets out the mitigation measures and proposals for compliance monitoring that have been incorporated into the scheme to mitigate the effects of noise. It also includes details of who would be responsible for the implementation of the measures, and the suggested mechanism of compliance to ensure that the proposals would be carried out as envisaged.

These are summarized as follows, for each activity:

Construction

Will be controlled by the submission of a Construction Noise Management Plan and will be the responsibility of the contractor(s) to ensure compliance with an agreed plan and will include

- Use of modern well maintained machinery in accordance with manufacturer's instruction.
- Key noise sources and stockpiles positioned to maximise barrier attenuation for nearest receptors.
- Noise Management Plan to identify and actions to be taken in response to noise limit exceedances and/or complaints.
- Maximisation of stand off distances between receptors and key items of plant.
- Operations limited to weekday and Saturday daytime, with further restrictions on particularly noisy operations.

As previously stated, the Council's Environmental Health officers would wish to see the hours restricted between 08:00 – 18:00 (Mon – Friday), 08:00 – 13:00 (Saturdays) and not at all on Sundays / Bank Holidays. They do however state that such restrictions should apply only to "noisy elements" of construction rather than entire operations and can vary depending upon circumstances and proximity of sensitive receptors. Any mobile crushing or screening plant must be operated subject to the requirements of a Permit issued under the Environmental permitting Regulations.

It is recommended that prior to the commencement of the demolition and construction phases a Noise, Vibration & Dust Management Plan must be submitted to the local planning authority for approval. This is a matter that can be conditioned.

Core Site Activities

Will be controlled by the Environmental Management Plan and additional details submitted in the reserved matters application (and conditioned where necessary) in relation to

- The construction of a 10m noise barrier to the north, south and east of the engine running facility.
- Restrictions on engine running from the facility on a Sunday or at night
- daytime hours activities

With regard to noise issues the Council's Environmental Health (Pollution Control) officers have raised no objection, on the assumption that that engine testing would only take place within the ABP.

Field Training Areas

These will be controlled by the Environmental Management Plan and development integral to the scheme and additional details submitted in the reserved matters application (and conditioned where necessary) in relation to :

- No blank or live firing at night-time (2300-0700),
- Acoustic bunds for screening Picketston activities.
- Blank firing only when necessary for demonstration purposes. Routine drills will not include firing.
- Completely enclosed firing range for screening noise from firearms.
- 3m high acoustic fence between FTA and Picketston boundary.
- No firing or use of thunder flashes will occur on Castleton External FTA. (used for non noise generating activities only, such as camping, crawling, running, hiding, driving, etc).

From the letters of representation received and the comments made by Llanmaes Community Council, it is recognised that potential noise and disturbance from the FTA is a major area of concern. However as mentioned earlier, regard has to be paid to the fact that the site is an existing military base where all these activities could take place now without any further control. Accordingly the use of conditions to control hours of operation and noise mitigation plans and physical measures must be seen as a positive improvement of the situation for local

residents which will give them some certainty over the controls that will be imposed on such activities.

Road Traffic

Noise from road traffic will be mitigated by a 1m high bund to west of proposed Northern Access Road, adjacent to Millands Farm.

The only means of noise mitigation currently proposed is a bund which forms part of the landscaping of the road, the full details of which will be conditioned in any permission granted with full construction details of the road and any associated landscaping (including the bund).

Whilst it is stated that noise levels will be mitigated by a 1 high bund, consideration should be given to the level of actual mitigation of noise by the proposed bund. This is particularly the case as the ES acknowledges that road traffic noise effects would be pronounced at receptors located close to the new northern access with significant effects are predicted at Froglands Farm and Millands Farm Caravan Park, where existing residential properties located close to the new access road are likely to experience adverse noise effects, due to operation of the new route.

Furthermore having regard to the above it should be noted that a condition is proposed which will require further details concerning possible acoustic screening for any properties considered to be adversely affected by the development.

Industrial Sources

Noise control will be integral to the scheme in respect of plant enclosures and buildings and mechanical services. The Environmental Management Plan and any additional details submitted in the reserved matters application (and conditioned where necessary) will seek to control operations within the waste compound and will include the use of Electric vehicles and waste compactors and limitations on operations within the Waste Compound during nighttime. The Plan should also seek to control outdoor unloading activities and vehicle waiting times at the various storage buildings.

Noise from the Llantwit Major WwTW will be mitigated and controlled through the use of Submersible pumps , acoustic enclosures fitted to new blowers, pipework to dampened to reduce noise transmission and Improvements to noise attenuation provided by building envelope, which will be integral to the scheme for which full details which will be submitted in the subsequent reserved matters application and where necessary required by condition.

17.4 Conclusion and Summary

It is clear that the Councils EHO is in broad agreement with the assessments and recommendations in the ES submitted as part of the proposals. These recommendations include the submission of the following:-

- Environmental Management Plan (EMP) to be agreed by condition by this authority prior to start of any beneficial operation

- Construction Environmental Management Plan (CEMP) prior to construction work starting and apply to all elements of the development. It must include methods for the control of
 - noise and its mitigation (also where appropriate reference to BS5228)
 - vibration and its mitigation
 - specific requirements for the mitigation of any piling operations
 - dust control and list of permitted mobile crushers and screens
 - agreed hours for the undertaking of 'noisy' works
 - As some of the above working hours will be in darkness during winter months lighting of the working area was not addressed but should be, since misaligned light beams are subject to nuisance legislation
- Operational Noise Plan to be agreed by this authority prior to start of any beneficial operation.

Notwithstanding the above there are also a number of additional issues raised by the Councils EHO concerning mitigation of any detrimental effects. The first of these concerns surround the operation of the firing range and engine testing however it is considered that the conditions proposed as part of this report will adequately deal with the mitigation necessary to overcome any negative effects generated.

It should be noted that concerns have been expressed about the proposed SFA accommodation located at the NW boundary of west camp which has been identified noise category C according to a TAN 11 assessment (using the projected figures). The mitigation measures proposed suggest a 'reasonable' level of noise insulation but it would appear at least a 'good to best' standard to ensure maximum protection (especially should actual noise levels exceed modelled noise levels). However as this scheme is in outline it is considered that such matter can be incorporated into the future reserved matter application.

Finally In respect of the proposed NAR it should be noted that the following properties, Froglands, Old Froglands, Rose Cottage and Milllands farm are adjacent to the proposal. While the submission indicates some mitigation measures which have already been proposed, it is recommended that a condition is applied that would require additional details of any necessary acoustic bunding or fencing necessary to mitigate any effects on the remaining properties.

18. HYDROLOGY, GEOLOGY & HYDROGEOLOGY

The main development area lies within three surface water catchments; these being the Llanmaes Brook/Boverton Brook, the latter designated as a Main River by the EAW (also known as Hoddnant Stream in its lower reaches), the Nant-y-Stepsau and the Rhyl Stream. Highway works at Waycock Cross lie within the surface water catchment area of the River Waycock,

From local knowledge and technical submissions, surface water attenuation is a key issue in the area, with flooding incidents relatively common in Boverton, where properties and an electricity substation have a history of frequent flooding from the brook. Significant correspondence has been received in respect of flooding concerns in this area.

Given the magnitude of development proposed, it is clear that the proposed development has the potential to impact on the water environment during site preparation, construction and operational phases, if suitable environmental controls and measures are not put in place. In this respect, Policy ENV 7 of the adopted UDP is important insofar as it requires that development will be permitted where it would not, inter alia, have an unacceptable effect on the quality or quantity of water resources or be potentially at risk from flooding, or increase the risk of flooding locally or elsewhere to an unacceptable level.

18.1 Flood Risk Management

The majority of the site lies within a zone of low fluvial flood risk, represented by zone A in TAN 15: Development and Flood Risk, although part is within zone B ('known to have flooded in the past') and there is an area of C2 ('at risk of flooding, without significant flood defences') close to the Nant-y-Stepsau along the northern boundary of the site.

A Flood Consequence Assessment (FCA) has been prepared for the site in accordance with TAN15 which summarises all sources of flood risk, identifying surface water runoff and fluvial flooding as the main flood risk to the site. Proposals for improving the Nant-y-Stepsau to accept Greenfield runoff rates/volumes, as well as the selection and appropriateness of sustainable drainage solutions for the various parts of the proposed development scheme, are also discussed in the FCA.

The FCA has been assessed in detail by the Environment Agency Wales, together with the background 'Hec-Ras Model' produced by Entec Ltd in support of the FCA, following which they have advised in their representations that the model provides a good representation of the local hydraulic climate. They therefore conclude, in summary, that the findings of the FCA and output of the Hec-Ras model submitted in support of the Defence Technical College and Aerospace Business Park appear to be acceptable.

The detailed comments on such matters emphasise that the FCA also states that the proposed development will be designed to preclude construction within the predicted flood risk areas, up to the 0.1% event, that is, to develop outside of the agreed flood outlines. They therefore request that any development approved by the local planning authority should be designed outside the agreed flood outlines.

18.2 Surface Water Drainage and Attenuation

The EAW advise that it is imperative that any surface water drainage from the new site is adequately managed so as not to increase the flow in the Boverton Brook, which has been known to cause frequent flooding in the village of Boverton, some 2 kilometres downstream of the application sites. They do note, however, that there is no history of flooding adjacent to the site where the Brook is

in its upper reaches and takes the form of a small ditch running alongside the public highway.

EAW also advise that a Greenfield run-off restriction applies to surface water discharges into the Nant-y-Stepsau, which is designated as a main river, and includes any surface water discharges into storm water sewers that ultimately drain into a watercourse. To this end, the FCA confirms the use of sustainable drainage systems (SuDs) where possible, and alternative attenuation to Greenfield rates elsewhere.

The maximum Greenfield run-off rate for any discharges into the Boverton Brook catchment is 3.9 litres/second/hectare, and for the Nant-y-Stepsau is 7.4 litres/second/hectare.

In response to this, the overall drainage strategy for the entire site includes various Sustainable Drainage Systems (SUDS). For the SFA sites, WYG have prepared an outline strategy proposing that a 'hard' SUDS solution will be implemented, including an aqua-cell geocellular below ground storage and a proprietary Garastor system for residential properties. The submitted FCA has also informed the illustrative layouts of the housing developments at Tremains Farm and North of West Camp/Picketston South West, with all units located within Flood Zone A at low flood risk.

To ensure that restricted run-off rates are applied on surface water discharges into the Boverton Brook and Nant-y-Stepsau, a condition is requested to ensure that a scheme for the provision and implementation of a surface water regulation system is submitted to and approved in writing by the Local Planning Authority, and such scheme is implemented prior to the construction of any impermeable surfaces draining to the system. This scheme must also be able to demonstrate that the Greenfield run-off rates for the Boverton Brook and Nant-y-Stepsau are maintained post development.

In addition to the above, the proposals include the diversion of parts of the upper reaches of the Boverton Brook, designed to provide betterment with regards to flood risk. However, these proposals will be the subject of future detailed discussions between the developers, the local planning authority and the Environment Agency, with details of the diversion scheme (including details of any necessary future maintenance works) needing to be submitted and agreed through condition to secure the submission of a diversion scheme (to divert part of the upper reaches of the Boverton Brook).

18.3 Foul Drainage and Wastewater Treatment

The submissions and consultation responses advise that the increases in wastewater flows generated by the development would exceed available treatment capacity at the existing Llantwit Major and West Aberthaw WwTWs and therefore sewerage requisition has to be combined with upgrading/ expansion of the existing waste water treatment works.

Dwr Cymru Welsh Water has previously produced an outline design for connecting foul water discharges from the proposed development site to the existing DCWW sewerage, treatment and disposal system. The proposed scheme

comprises a new foul pumping station on-site and a rising main to deliver foul flows to Llantwit Major WwTW, as well as an extension of this WwTW to accommodate the additional flows. Additional foul flows are to be dealt with through funding of conveyance infrastructure (new foul pumping station and rising main) and enhancements to treatment provisions at Llantwit Major Wastewater Treatment Works (WwTW).

Welsh Water has since advised that the WAG has changed its development proposals since that outline design (February 2009) to the extent that the report and associated Strategy need to be reviewed and revised. Such a proposal has been provided to WAG but has yet to be progressed. They do, however, advise that they are confident that the development can be served by sufficient infrastructure, and that they agree in principle with the Foul Water Drainage Strategy, while they require that sewerage and wastewater treatment facilities are installed to service the existing and future development, in accordance with a revised Foul Water Drainage Strategy. This can be appropriately conditioned.

In order to ensure that the Wastewater Treatment Works and conveyance infrastructure is capable of treating all additional foul flows and also to prevent failure of statutory and non-statutory water quality objectives, the EAW also request a condition to ensure that such improvements take place without any adverse impact on the environment, and the implementation of such approved works prior to the first occupation of any buildings/dwellings approved by this permission.

As detailed above, it is also intended that a new foul sewage pumping station (SPS) will serve the proposed development, and an emergency overflow is proposed with two potential receiving watercourses under consideration (although EAW advise that the emergency outfall location (Boverton Brook or Nant y Stepsau) is yet to be agreed).

The EAW have advised that discharge (even only in an emergency) into the Boverton Brook may not be acceptable, and that they expect to be re-consulted on any proposals regarding the location of the emergency overflow outfall and discharge. This would ensure the watercourse selected for the outfall location could achieve sufficient dilution. Irrespective of planning permission, however, consent to discharge will be required from the Environment Agency for the new foul pumping station / emergency overflow.

18.4 Surface water drainage and pollution prevention measures

If run-off from roads and residential parking areas are to be considered for discharge to soakaway, then the EAW advise that they would need to be satisfied that there were adequate protective measures in place including arrangements for effective management and maintenance of the system.

With regards to the increase in car parking and impermeable surfaces, oil interceptors are recommended to be installed on site. SuDS are also a possible way of treating contaminated surface water. Techniques that control pollution close to the source, such as permeable surfaces or infiltration trenches, can offer a suitable means of treatment for run-off from low risk areas such as roofs, car parks and non-operational areas. In higher risk areas, other SuDS facilities such

as constructed ponds, wetlands or swales could be considered. Where there is a high risk of oil contamination (that is, car parks) it will be appropriate to use an oil interceptor as part of the SUDS scheme.

The EAW request that the above details and implementation of schemes are controlled by way of condition, requiring full details of a scheme to dispose of foul and surface water.

Welsh Water advises that they have had no detailed discussion with the developer as to their approach to the surface water generated by the development. However they assume that given the nature of the land and presence of watercourses, all surface water would be dealt with on site, and wish to see particular attention given to the use of sustainable drainage within the design of any structure or drainage system.

In this respect, they support the overall strategy that foul and surface water flows are separated, and that no surface water is to be discharged to the public sewerage system, and the overall strategy that surface water runoff and flood risk is to be managed by a Surface Water Drainage Strategy.

18.5 Silt, Oil and other Possible Pollutants

The potential pollution of controlled waters by silt, oil and other possible pollutants and suitable mitigation measures are mentioned throughout the application. The mitigation measures outlined must be adhered to and implemented otherwise there is a risk of the potential pollution of controlled waters. Accordingly, EAW request submission and approval through condition of a scheme to treat and remove suspended solids from surface water run-off during construction works, together with a condition covering storage of oils, fuels and chemicals, in order to prevent the pollution of controlled waters.

18.6 Highway Drainage

With regard to highway drainage works, the following are proposed:

- St Athan Junction: highway drainage for the junction improvement at St Athan junction will be accommodated in an improvement to the existing highways drainage system on a like for like basis;
- Gileston to Old Mill: surface water runoff will be treated using a positive highway drainage system, before discharging to the River Thaw;
- Waycock Cross: surface water runoff will be treated using a positive highway drainage system, attenuated to the Greenfield runoff conditions stipulated by the EAW, before discharging to the River Waycock. At the new Waycock roundabout, surface water runoff will be routed to attenuation features in the centre of the roundabout

The full details of the above will need to form part of the submissions in respect of overall surface water drainage conditions, as well as detailed highway design.

18.7 Land Contamination

Policy ENV 26 of the UDP states that redevelopment of contaminated and unstable land will be permitted where the contamination and/or instability will be removed or reduced to a level where there is no unacceptable risk to health, safety and the environment.

The applicant has confirmed that remediation work will have been completed prior to construction commencing on site. The MoD has also indicated that the site is free of munitions. Whilst the submissions indicate that every effort has been made to ensure the removal of contaminants and munitions from the site, a watching brief will need to be undertaken during construction in order to certify that any discoveries are safely removed

Table 10.5 in 'Chapter 10: Land Quality' of the Environmental Statement (ES) outlines planned additional investigations which include: an additional survey for the Defence Technical College (DTC) and further site investigation for the SFA, which needs to be secured via planning condition.

Accordingly, conditions are recommended in respect of submission of a scheme to deal with the risks associated with contamination of the site, to include a preliminary risk assessment, a site investigation scheme, an options appraisal and remediation strategy and a verification plan identifying any requirements for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action. EAW also request a condition dealing with unexpected contamination. This advice is echoed by the Council's Environmental Health Officer recommending compliance with the additional investigations proposed in the ES.

Given that the ES (Chapter 11: Hydrology, Geology and Hydrogeology) recommends the use of planning conditions to enforce compliance with the CEMP and EMP, with the Construction and Phasing Statement (section 2.11: Proposals for dealing with any ecological, archaeological or contamination issues during construction) referring to 'Contamination/Remediation Mitigation Plans' being drawn up for each construction site by Parsons Brinckerhoff/Pell Frischmann, the EAW also request that they are consulted on such mitigation Plans.

18.8 Water Supply

Section 11.5.3 of the Environmental Statement is entitled "Water supply and re-use" and contains the proposed water supply infrastructure in general terms. The section states that water supply requirements are yet to be advised to DCWW to enable modelling, establishing of improvements, etc to be undertaken.

With respect to water supply, DCWW advise that there is insufficient capacity in their potable water supply network, such that they require that sufficient upgrades are carried out in line with water supply required for the development. They advise that discussion as to the rate of supply has been ongoing and in depth., including an initial assessment of water supply demands and the scope of the associated upgrades in May 2009. Since that date, however, it appears the required rate of supply has been overestimated and needs to be revised accordingly.

While they await such further information, they nevertheless do not object and recommend a condition requiring that a scheme for off-site water supply to serve the development is implemented in full prior to any beneficial occupation of the development hereby, this being in order to ensure an adequate supply of water can be provided and to ensure that a supply is maintained to existing customers.

19. HISTORIC ENVIRONMENT

19.1 Impact on Listed Buildings

The site and its surroundings contain the following buildings listed of architectural and historic interest:

- Church of Saint Brise: a small church of probably 12th century origin. The church is located within the existing perimeter fence to the DARA base on its northern boundary in Eglwys Brewis.
- Bethesda'r Fro Chapel: a congregational chapel founded in 1807, although the building dates from circa 1840 (grade 2). The chapel, which is in regular use, is located immediately to the north west of the West Camp on Eagle Road.
- Picketston House: a Tudor style gothic house of circa 1840 (grade 2). The house, which lies within a group of cottages and outbuildings which make up the hamlet of Picketston, lies to the north west of Eglwys Brewis.
- An Ensemble of Listed Buildings at Castleton Farm: These include the farmhouse (listed grade 2*), bake house and donkey stable (grade 2) and former barn (grade 2). The farm lies to the north east of Saint Athan.

19.1.1 Church of Saint Brise

The Grade II Listed Church of St Brise is a small Church, probably of C12 or C13 origin, set within a small churchyard bound by a stone wall, which occupies a location adjacent to Eglwys Brewis Road, at the heart of the proposed new entrance (as described earlier).

The church (deconsecrated) was last used for a religious service in the late 1980's, and has received little in the way of repair work since, its condition deteriorating badly. The building is of some interest in terms of its simple design, form and scale; unusually for the Vale of Glamorgan the structure of the church remains virtually unaltered since its construction in the 13th century. It is noted for the significance of its historic fabric with the interiors containing wall paintings and fresco. The church has a small, attached graveyard enclosed in stone walls which contains several recent graves relating to the occupancy of the Saint Athan airfield by the Royal Air Force.

The church has notable connections through repairs undertaken in 1900 through the auspices of the Society for the Protection of Ancient Buildings and the architect William Weir, a former apprentice and pupil of the well known architect Philip Webb. The repairs were undertaken with great care to retain the original character of the church according to the tenets of the Society.

The church will achieve prominence in terms of location at the entrance to the Academy and is to be restored to a high standard as part of the proposals as a place of contemplation, ceremonial and for the presentation of colour standards.

A separate Listed Building Consent application for works to the Church itself has been submitted, while works within the curtilage and in the immediate area/gyratory surrounding the Church will be addressed through detailed submissions at reserved matters stage, which will need to consider carefully the sensitivity of this important historic site.

Nevertheless, although the setting of the Church will change dramatically, it is considered that the works of refurbishment to the building itself, with appropriate access arrangements to facilitate its use as part of the faith area and for potential community use will ensure that the character, appearance and setting of the listed building will be satisfactorily protected, and indeed enhanced. Given that the building has been 'at risk' for a period of years, in disrepair and disuse, its repair and reuse within the Academy is to be welcomed and supported.

19.1.2 Other Listed Buildings

The chapel at Bethesda and Picketston House are only affected insofar as their settings are subject to varying levels of proposed development in proximity to them. This entails new housing to the north of the chapel for the purpose of service family accommodation, and housing to the west of Picketston. Neither of the proposed sites lies in immediate proximity to the listed buildings and the impact on them is, therefore, considered to be slight. Picketston House has a noteworthy setting which exploits views to the south from its front elevation, but this is retained in the application as open farmland.

In addition, while the development and site area is close to other Listed Buildings in the area such as the ensemble of Listed Buildings at Castleton Farm, the proposals are not considered to have any demonstrably harmful impact upon their setting.

Accordingly, it is concluded that the proposals would have no harmful impact upon listed buildings in the locality, while also positively enhancing the condition and setting of the Church of St Brise. The proposals therefore accord with the provisions of Policy ENV 17 of the Unitary Development Plan.

19.2 Impact on Conservation Areas

The application site boundary (for DTC and ABP) does not include any Conservation Areas, and therefore there will be no direct effects upon their character or appearance.

There are a number of Conservation Areas which lie within the immediate area of the proposed development, including Llantwit Major, Llanmaes, Boverton, Gileston and Flemingston, with the impact on the last four being specifically addressed in the submitted ES due to their relative proximity.

In considering such impacts, the direct, physical impact of building in terms of setting in each case is considered to be small, while it is considered that the Conservation areas of Llantwit Major, Boverton, Flemingston and Gileston are sufficiently distant from the development sites such that there would be no significant impacts upon their character, appearance or, particularly, their setting.

The impact on Llanmaes Conservation Area to the west is similarly considered to be largely unaffected, with no material change to the historic core of the village. The ES has considered the combination of residential development viewed at closer proximity and additional large scale features within the ABP and DTC scheme becoming skyline features of views from the southern approach to the village, and concluded that this would give rise to a low (adverse) magnitude of change which combined with the high sensitivity of the Conservation Area would result in a “moderate/substantial overall effect which would be significant”.

Notwithstanding this, however, it is considered that the distances involved and the close-knit nature of the historic core of the Llanmaes Conservation area is such that the physical impact of the DTC development would not cause demonstrable harm to the character, appearance or setting of the Conservation Area.

For each Conservation area, however, there will be potential other influences in terms of increased local traffic movement in respect of each of the villages and, potentially, construction related traffic. In this respect, it is of note that consultation undertaken during the recent preparation of conservation area appraisals and management plans suggested that one of the most important issues for residents living in the village conservation areas relates to volume and speed of traffic, as well as to the need for enhanced traffic management. These are issues which will need careful evaluation in terms of impact of the future development as it comes into occupancy.

For the reasons given above, it is concluded that there would be no demonstrably harmful impact on the character, appearance or setting of the Conservation areas in the vicinity of the site, such that the proposals would accord with the objectives of Policy ENV 20 of the Unitary Development Plan.

19.3 Impact on Archaeological Resource

In considering the adequacy of the Historic Environment Chapter (within the Environmental Statement), Cadw has advised that it is based on an extensive archaeological assessment, and consisted of a detailed desk-based assessment based on a comprehensive study of records and aerial photographs, complemented by a walkover and geophysical surveys.

The geophysical work has been in two parts, with a comprehensive magnetic susceptibility survey used to locate potential anomalies, followed by more detailed magnetometry survey of identified anomalies and sites identified in the desk-based assessment. From the results of this work, an archaeological field evaluation has been designed and commissioned.

Cadw has advised that they consider the archaeological evaluation and Historic Environment chapter to have been carried out to a high standard , in line with the Welsh Assembly Government's guidance.

The Council's archaeological advisors, Glamorgan Gwent Archaeological Trust (GGAT), advised that nationally important archaeological features could be located in the application area, and that the applicant should be requested to commission such archaeological work, and that the application should be deferred until a report on the archaeological evaluation has been submitted.

This is in accordance with the advice in the Development Brief, which advised that:-

“Archaeological investigations since 2003 at Eglwys-Brewis, in advance of construction of the DARA Super-Hangar, revealed remains of Medieval occupation and a ditched enclosure of possible Iron Age or Romano-British date. There is some potential for the presence of further features within previously undisturbed parts of the site. It will therefore be necessary for further development to be **preceded** by appropriate archaeological investigation, in consultation with the Glamorgan/Gwent Archaeological Trust and the Local Planning Authority, in order to ensure that any further features can be appropriately recorded”.

Given that such evaluation work was not undertaken prior to submission (despite the advice in the Brief), as required by Planning Policy Wales (2002) and Circular 60/96, the applicant was requested to conduct an archaeological field evaluation. The field evaluation is the final stage of archaeological investigation prior to the determination of the planning application and follows the compilation of a desk-based archaeological assessment and a geophysical survey of the area.

Such work has since been commissioned, with the agreed project design for the evaluation work requiring the excavation of some 243 trenches, all being 25m by 2m. The field evaluation has been ongoing during August 2009/ early September 2009, with such works being the subject of monitoring and reporting by the Council's archaeological advisors.

Following completion of such evaluation works, a final response has been received from Glamorgan Gwent Archaeological Trust, who have concluded as follows: -

The archaeological assessment and evaluation has provided sufficient information for the impact of the proposed development on the archaeological resource to be determined.

The work has not identified any archaeological sites or monuments of sufficient importance for the current planning applications to be refused on archaeological grounds. However, as it is clear that there is an important and complex archaeological resource in most of the proposed development areas that there will be a need for appropriate methodologies to be devised to retain and preserve these archaeological features in the new development where this is possible and for a programme of archaeological investigation to be implemented where the archaeological resource will be damaged. In order to ensure that the required works are carried out it is

suggested that two conditions are attached to any planning consents that are granted by your Members in response to the current applications. The first condition will require the applicant to submit a detailed programme of investigation for the archaeological resource prior to the development commencing. Whilst the details of this scheme will require further analysis of the results of the archaeological evaluation, we envisage that it will take into account the recommendations made in this letter and include areas of the site being stripped under archaeological supervision using machines with a backacter equipped with a toothless bucket prior to any other construction work commencing with any identified archaeological features being investigated and recorded, along with contingency arrangements in case unexpected discoveries are made.

Accordingly, the grant of planning permission subject to conditions would meet with the objectives of Policies ENV18 - Archaeological Field Evaluation; and ENV19 - Preservation of Archaeological Remains of the Unitary Development Plan.

19.4 Impact on Scheduled Ancient Monuments (SAM's)

Cadw have made the following observations on the SAMs in the locality, with the first of these impacts largely related to ABP application, but reported here for completeness.

West Orchard Manor House (GM083) - This site lies immediately outside the boundary of the southern part of the proposed Aerospace Business Park. There are currently two RAF buildings close to the western boundary of the scheduled area. The development masterplan shows these being replaced by two buildings with similar footprints. Therefore, in Cadw's opinion, any effects on the setting of this ancient monument would be considered to be slight.

East Orchard Manor House (GM082) - This complex of ruinous masonry buildings lies over 250m south of the application site boundary. The area concerned is to be retained in its present form for training purposes, so in Cadw's view there will be no effect upon the setting of the monument. About 400m south of the scheduled area, there is potential for highway improvements to affect the setting of the monument. However, the monument lies within the woodland flanking the east side of the River Thaw, effectively screening any roadworks from the site.

Deserted Medieval Village North East of Rock Farm (GM307) - This complex of medieval earthworks lies in open pasture about 120m from the development site boundary. As with GM082, this part of the development area will be used for training purposes only, and the landscape will remain unaltered. Cadw therefore considers there will be no effect upon the setting of the monument.

Accordingly, there are no objections in respect of the impact on Scheduled Ancient Monuments in the locality.

19.5 Other Historic Environment effects

During its review of the twentieth century military structures, Cadw has identified the Airfield Ground Defences at RAF St Athan as being of national importance. Extended discussions between Cadw and Entec, the developer's archaeological consultant during the preparation of the Environmental Statement, have led to a scheme where 28 out of 30 structures making up this system will be retained in the development (an individual pill box at Picketston together with an individual pill box at Batslays as part of the ABP scheme).

Cadw advises that, if planning permission is granted for this development, Cadw will consider whether to afford the 28 structures to be retained, statutory protection under the Ancient Monuments Archaeological Areas Act 1979.

In this respect, Cadw have no objection, and it is concluded that the loss of the two pill boxes does not diminish the importance of the surviving group nor does it compromise an understanding of the group or particular defensive arrangements between related clusters of defence structures. As inferred by Cadw's response, the provision of sports facilities at Picketston also offers the prospect of managed access to the important cluster of structures focussed on the Battle Headquarters, a key feature of the Airfield Ground Defences.

19.6 Other Matters

In their representations, the National Museum of Wales have recommended the creation of an 'archaeological advisory group', within which their staff would be represented, with they consider could considerably benefit the flow of information during the archaeological works, and provide additional support, quality assurance, long-term continuity and maximise the opportunities for research synthesis and presented outputs. The advantages of such a group are not strictly part of the consideration of the planning merits, but the applicants have been advised of such a proposal and encouraged to facilitate such a group should the archaeological evaluation results merit it.

With respect to the museum, they also feel there to be strategic merit in a broader remit than just military heritage, with the wider civic benefits that could result from a project such as a regional museum for the Vale. While this is considered to have merit, such discussion are best considered by the NMoW facilitating discussion with the applicants with a view to understanding how such proposals could benefit the scheme as a whole.

20. ECOLOGICAL ISSUES

From a consideration of section 8 of the report, it is apparent that one of the key areas of concern relates to the loss of habitat and biodiversity as a result of the development. This section of the report considers matters relating to ecology, having regard to national policy and guidance and the comments of the CCW as a statutory consultee.

Paragraph 5.5.11 (Protected Species) of Planning Policy Wales states that “the presence of a species protected under European or UK legislation is a material consideration when a local planning authority is considering a development proposal which, if carried out, would be likely to result in disturbance or harm to the species or its habitat.”

Paragraph 5.5.12 further adds that “.....new developments for which development works would contravene the protection afforded to European protected species require derogations from the provisions of the Habitats Directive. A derogation may only be authorised if there is no satisfactory alternative and if the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in its natural range.” More detailed advice and guidance is contained within TAN 5 – Nature Conservation and Planning (November 1996).

Policy ENV 16 within the adopted Unitary Development Plan states that permission will only be given for development that would cause harm to or threaten the continued viability of a protected species if it can be clearly demonstrated that there are exceptional circumstances that justify the proposals, there is no satisfactory alternative, and effective mitigation measures are provided by the developer.

This essentially follows the requirements of National and European legislation, particularly, the Conservation (Natural Habitats & c.) Regulations 1994, governing the impact on protected species.

20.1 The proposals

The application has been accompanied by a full range of ecological surveys, impact assessments and strategies for protection of protected species. In addition, an Ecological Mitigation Strategy to illustrate the required protection proposals for great Crested Newts, Bats, Dormouse and Otters has been submitted. The submissions also advise that the impact of the statutory requirements in respect of Protected Species has also influenced the Masterplan where green corridors, protected habitats and habitat enhancements are integrated within the site wide landscape proposals.

The extensive surveys undertaken at and around the site have identified the presence of species including: -

- Four species of reptile (slowworm, a small number of adder, grass snake, and common lizard)
- Great Crested Newt
- Common frog, common toad and palmate newt
- Evidence of otter activity on the majority of the watercourses
- Limited evidence of badger activity
- Presence of dormouse (a single nest found during surveys in the south-west part of the site)
- a number of confirmed bat roosts within buildings
- At least six species of bat

- A large number of predominantly common bird species, including four red list species, 11 UKBAP and two LBAP species, 14 species of importance under Section 42 (s42) of the NERC Act (2006) and three Schedule 1 species (although of these only barn owl *Tyto alba* was found to be breeding).
- European Eel (UKBAP and s42 species) occurs in watercourses within and adjacent to the site, and bullhead, a local and declining species, is also present in some watercourses.

From the detailed surveys, in essence the key issues are as follows: -

- East Camp Three ponds with Great Crested Newt (GCN) populations are located within the East Camp site, with fragmented habitats providing foraging resources and nesting habitats for common species, but which do not at present represent a 'joined-up' link to the wider landscape.
- Picketston Key considerations to be observed by proposals for the Picketston area include existing Bat Roosts, Bat flight Lines, evidence of Barn owl activity and the potential within the Nant-y- Stepsau Stream areas for otter use.
- Castleton To the east of the sites, a candidate Site of Importance for Nature Conservation (cSinC) is located along (and including) The River Thaw, Rills Valley, Oxmoor Wood and Salt marsh and provides a diverse habitat of high ecological value which abuts directly onto the Castleton site area. The Lower River Thaw Special Landscape Area is used extensively by bats, otters, badgers and birds, with suitable habitats for crayfish and water voles.

20.2 Analysis

Following extensive survey work, the Ecological Mitigation Strategy has been developed through discussion with CCW, WAG and the Council, and can be summarised as follows:

- Where possible the retention of trees covered by TPO's and important hedgerows.
- The protection of Nant y Stepsau, and Boverton Brook water courses.
- Translocation of Bats and the re-provision of roosts within the Application area.
- Translocation of great Crested newts and the re-provision of ponds and habitat within the Application area.
- improvement of biodiversity through use of native and locally appropriate species.
- An overall considerable enhancement of habitat for all species, but in particular GCN where an exemplar scheme of mitigation and enhancement has been developed.

The Countryside Council for Wales (CCW) has advised in their consultation response that they welcome the commitment to the conservation and enhancement of biodiversity proposed in conjunction with these developments and recognise the extensive ecological work to date. Their primary comments relate to the European Protected Species on site, (those species listed on Schedule 2 of the Conservation (Natural Habitats, &c.) Regulations 1994), most particularly great crested newts, bats and dormice.

The original submissions have been complemented by additional information received by letter dated 28th August 2009 letter, which CCW considers now provide an adequate basis upon which to make an informed assessment of the likely impact of the proposals on the favourable conservation status (FCS) of the species concerned.

Although they state that they still have a number of outstanding concerns, they consider it should be possible to address these concerns through the application of appropriate conditions, with such matters discussed below.

20.2.1 Great Crested Newts

Significant survey work has been undertaken and ecological mitigation proposed in respect of the impact on the GCN populations within and around the site boundary. The submissions advise that environmental measures will be implemented to avoid/ minimise/ compensate for potentially significant effects on GCN arising as a result of the development, and that the favourable conservation status of the local GCN population would be maintained and significant negative effects avoided, while it could be argued that parts of the population will be enhanced through provision of terrestrial habitat of greater quality than that it replaces.

As part of the mitigation strategy, it is proposed to create a 'necklace' of additional breeding ponds around the outer peripheral areas of the site(s), the majority of which will comprise newly created ponds requiring planning permission. (note: nine ponds to the south of the runway have already been provided in preparation for the translocation of newts from the 3 emergency water storage tanks on East Camp.)

The proposal for these additional ponds around the outer periphery involves them being located approximately 500 metres or less apart from each other and being linked by a continuous corridor of appropriate terrestrial habitat that will be suitable for the movement, foraging and hibernation of the Great Crested Newt.

CCW have advised that they welcome the intention to create a 'necklace' of new ponds around the periphery of the site, linked by a corridor of terrestrial habitats, which they state will add considerably to the aquatic habitats available to great crested newts in the area, though they have sought clarification about the design of these ponds and when they will be constructed, as well as details of what additional measures will be taken to ensure that these new ponds maintain a water supply.

The need for these to be provided (and when) can be adequately conditioned, and will also be controlled through the required WAG license, while their detailed design etc, will in any event be required to be approved through a planning application seeking permission in full for the construction of ponds in accordance with the Ecological Mitigation Strategy. This will ensure that the precise nature and form of these ecological measures is demonstrated in support of the overall ecological strategy for the DTC and ABP sites.

In addition, it is understood that the intention is to proceed with implementing such proposals at an early stage in the programme in order to provide the appropriate mitigation measures as soon as required.

CCW has expressed concerns in respect of the supporting terrestrial habitat corridor, and potential 'pinch points', and the need to ensure that these areas of reduced width are not too narrow and therefore subject to 'edge effects'. In this respect, they sought assurance that the corridor will be a minimum 10m at all times and that the corridor is practical and achievable in real terms. They also stated that, given that management of habitats created for great crested newts cannot be guaranteed outside the applicants' ownership, they recommend a wider terrestrial corridor minimum size 20m in width, a view which is strengthened by the intention to exclude great crested newts from the working base, since it is relying on habitats outside of the site and outside of the applicants control to make the case for supporting habitat for each pond. A condition is recommended to cover further submission of details in this regard.

Finally, they have stated that they welcome the c.144ha of terrestrial habitat which will be available to GCN within land owned by the applicant (most of which is within the Castleton Farm training area) and the indication that this will be managed in the long term. Nevertheless, they require clarification on the nature of the management of the terrestrial habitat corridor & other terrestrial habitats, and assurances about the mechanisms used to ensure that appropriate management for great crested will be carried out in the longer term. They accept, however, that this can be conditioned through requirement for a long-term management plan.

20.2.2 Bats

Survey work has been undertaken in respect of bats, and submissions indicate that mitigation measures for bats will include, amongst other things, the replacement of roosts and the provision of new roosts by the construction of 6 new, purpose-built bat house buildings, incorporating underground sections, to be located around the periphery of the development sites. These are the subject of a separate planning application.

In response, CCW have welcomed the extensive survey work carried out associated with bats and recognise the challenges posed by the volume of buildings, structures and trees to be surveyed. They are also satisfied that such matters can be addressed through condition relating to such bat mitigation and compensation measures.

20.2.3 Dormice

The development has the potential to result in two effects on the Dormouse population, those of habitat loss and fragmentation. In this respect, a development licence from WAG is required prior to works commencing to allow the potentially disturbing works to proceed without causing an offence under the relevant legislation. This will detail the measures that will be implemented to minimise potential effects on dormouse.

CCW note that the strategy for mitigating impacts on dormice relies on 2 key aspects; the planting of new (enhanced) corridors as a place to live and for movement and the provision of dormouse bridges and crossings.

CCW are now satisfied that such matters can be dealt with through condition, including details of the location and form of wildlife crossings.

20.2.4 Other Species (including Otters, Reptiles and Badger)

The impact on / mitigation for other species include: -

- **Otters** recorded on all watercourses within the St Athan development area. Given the amount of suitable alternative habitat available, the amount of habitat loss or altered will not significantly affect the long-term distribution and abundance of the local otter population. Therefore the conservation status will be maintained and significant effects will not occur
- The main impacts on **badgers** from the proposed developments will be loss of foraging habitat, habitat severance and potential road deaths. Propose provision of badger fencing along the Northern Access Road, Southern Access, Road and the Gileston to Old Mill sections
- Mitigation will generally look to protect **reptiles** *in situ* during construction, allowing re-colonisation following completion of these works. Reptile clearance will be undertaken through a combination of habitat manipulation and fencing and trapping; Translocated reptiles will be accommodated overwinter by provision of additionally constructed hibernacula at two chosen receptor sites; St John's Valley and Castleton.
- In general, the main impacts on **breeding birds** will result from site clearance operations, including demolition. The impacts of the development will be alleviated / removed through Best Working Practices with regards to birds, including all vegetation clearance being undertaken outside of the bird breeding season (March to September inclusive).

CCW have welcomed the proposals for other species on site, particularly otter, reptiles and badger, and particularly welcome the intention to re-survey areas previously surveyed for these species as the development progresses, to ensure that ecological interests have not changed in the intervening time.

20.2.5 Hedgerows

A number of hedgerows across the site are designated as "important" under the 1997 Hedgerow Regulations or are considered species-rich.

The majority of hedgerows (including “important” hedgerows) within the area are intensively managed for agricultural purposes and as such do not generally provide good ecological habitat. Impacts on hedgerows will be complete loss or more often severance of the hedgerow. Mitigation will comprise the translocation of hedgerows where practical and appropriate and the planting of new hedgerows.

20.3 Conclusions

In conclusion, it is clear that detailed consideration has been given to the impact on protected species, and to the conservation and enhancement of biodiversity in conjunction with these developments, with both CCW and the Council’s ecology section satisfied that the ecological mitigation proposals are acceptable, subject to the submission of additional detailed information in respect of detailed monitoring, management and mitigation.

It will be necessary for the developer to apply for a development licence from the National Assembly (relating to European protected Species such as Great Crested Newts and Bats), and the applicants are fully aware of such legislative requirements.

Before a licence can be granted the “three tests” specified in the Habitats Directive (given below) have to be met, and where a European Protected Species is found to be present on site, the Local Planning Authority should consult with the Countryside Council for Wales to seek their advice on whether test (ii) is met before the granting of a consent.

The “Three Tests”

- (i) There is “no satisfactory alternative” to the derogation.
- (ii) The derogation is “not detrimental to the maintenance of the populations of the species concerned at a favourable conservation status in their natural range”.
- (iii) The derogation is “in the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment”.

Of the tests, the Local Planning Authority is required to ensure that tests 1 and 3 have been satisfied and CCW need to ensure that test 2 is satisfied.

Provided that the commitments in the mitigation strategy are translated into, and implemented as, enforceable conditions as part of any planning permission, CCW has no objections, and therefore it is concluded that the applicants have satisfactorily demonstrated that test (ii) would be met in that there will be no detriment to the favourable conservation status of protected species at the site.

In considering test (i), it is accepted for all the reasons expanded upon in this report that there is no satisfactory alternative to the site / development while similarly in relation to test 3, it is considered that the scale and nature of the

application, and its acknowledged economic and other benefits to the Vale of Glamorgan, together with the significance of the mitigation and positive enhancements proposed by the proposal, that there are overriding reasons why this test is met.

Accordingly, subject to appropriate conditions requiring the submission of further detailed ecological reports etc., there is considered to be no overriding objection on ecological grounds such that the development would accord with the objectives of Policy ENV16 of the Unitary Development Plan.

21. HEALTH IMPACT

21.1 Impacts on Health

As part of the Environmental Statement a health needs assessment (HNA) has been undertaken and has estimated the potential impact on its services based on an assessment of the total number of people associated with the development who will be dependent on NHS health facilities. The Assessment indicates that St Athan currently has two branch surgeries (which do not provide services every working day) that serve the population. In addition it is noted that the DTC proposal will provide its own health and dental care facilities which will cater for all service personnel.

The assessment has analysed the demand for health services having regard to the fact that the area of residence of the incoming civilian employee population will be difficult to establish. Many of the roles at the site will be taken by residents of St Athan, the wider Vale of Glamorgan and travel-to-work-area. These individuals already receive primary care within the existing NHS provision. A number of civilian employees will locate to the area to fill employment roles at the site but will locate not only at St. Athan but within the wider travel-to-work-area (TTWA) as well.

Members will note that the DTC and ABP developments are not proposing to construct additional housing to support this potential workforce (only the service personnel who will be catered for by the proposed on site health care provision).

The proposed DTC will provide general practitioner and dentist services to cater for the military personnel. The provision of GP services will also cater for service families (although this extension of provision to service families does not include dental).

Nevertheless the new population associated with the proposed development are likely to generate additional demand on a range of health services and it is estimated in the HNA that the equivalent of a fully functional GP practice would be required. This conclusion is however based on the assumption made that all employees associated with the development are new to the area and will live at St Athan. As discussed above it is expected that many will already be resident in the area or may reside in the wider travel-to-work-area implying a more dispersed demand for services. This effect on local health services is conditionally assessed to be negative but not significant.

21.2 Sport and Recreation Facilities

In addition to the direct health care consequences there will be a secondary positive impact from the proposed sports and recreational facilities which will be provided as part of the DTC proposals. A primary land use aim of local policy in the UDP is the protection and improvement of existing recreational provision and providing new facilities in areas of identified deficiency. Technical Advice Note 16 – Sport, Recreation and Open Space introduces benchmark standards for provision.

It is noted that the SFA housing will, in part, be provided on the former Stadium/Golf Course site, however the course will be redesigned and extended onto adjoining land in the ownership of the Welsh Assembly Government. There will be no disruption to users of the golf course as a commitment has been made to replace holes before the SFA construction takes place. SFA developments will also include appropriate provision for children's play areas.

In addition to the above a variety of other sport and leisure facilities are to be created as part of the proposed Defence Technical College development. The majority of these facilities will be made available to the public outside the core hours of 08:00 to 18:00 at a suitable charge to be agreed by the Council. In addition a Museum of military history is to be constructed and will also be available to the public as well as a community centre, faith centre and Ghurkha temple and St. Brise church building which will be open for viewing by the public.

The inclusion of these services will greatly extend the provision of leisure facilities in the Vale as many of these services are not currently available and are anticipated to provide a positive and significant effect for the local community.

21.3 Potential Effect on Local Health Services Arising During Construction Period

Construction workers will not be provided with any health care from the MoD health care centre at St Athan (with the exception of first aid response). This is set against a context of limited additional capacity in primary care provision in the St. Athan area. In terms of secondary care provision the main requirement from the construction population is likely to be for accident and emergency provision. This increased demand is estimated in the Health Needs Assessment to be approximately between 9 to 15 injuries/1,000 workers per year.

The *St Athan DTC Health Needs Assessment* assesses the impacts on its services under various scenarios regarding residency of construction employees. The most likely scenario is considered to be that 80% of the workforce will be 'local' and reside within the TTWA. Under this scenario it is reported that there will be limited additional capacity for the additional 20% specialist contractors and the Health Needs Assessment recommends that the situation regarding provision for these workers, whose residence and length of stay is not yet confirmed, will be closely monitored in future multi-sectoral planning meetings. This assessment indicates that an expansion of primary services may be required dependent on residency and duration of stay of workers from outside the TTWA area. This effect is conditionally assessed to be negative but not significant based on the assumption that negotiations regarding impacts on local health services will

continue with the objective of mitigating significant impacts to local health services.

It should also be noted that the developers of both DTC and ABP have indicated their intention to undertake a full health needs assessment which will be undertaken in conjunction with the Local Health Board. This will seek to identify all negative and positive health effects generated by the developments and provide an ongoing solution to problems should the need arise.

Having regard to the above and the contention that all new employees at the site will not be new to the local area or will reside in St Athan, health care facilities will be provided within the wire for service personnel and that positive contribution that the community and sport facilities that will make, the views expressed in the Environmental Statement are considered acceptable.

22. LANDSCAPE & VISUAL ASSESSMENT

An assessment of the physical landscape and visual impacts of the development will, inevitably, be impacted upon by the historical context of the area as a historical RAF, and present MOD, base, with large-scale buildings and activities.

Given their significance as developments departing from the development plan as development on Greenfield land, and which will inevitably have a significant impact on the existing rural landscape, the visual impact of the NAR (included in full for detailed consideration at this stage) and SFA have been considered elsewhere in detail, particularly given the level of concern expressed through consultation and the specific location and form of these developments.

It is also evident, from the detailed analysis that precedes this section, that the advantages associated with the development in question are considered to be significant, such that they represent a material consideration of sufficient weight to override the normal policy presumption against new development in the countryside (NAR and SFA in the main).

Within this context, this section thus seeks primarily to identify the impacts associated with the core of the DTC development where it affects (largely) development within the RAF St Athan boundary defined by the Unitary Development Plan (Policy EMP 10 refers), and consider whether such impacts can be mitigated or if not, whether these are of such significance that they justify refusal of the application on landscape grounds. As all such matters (other than the NAR) are reserved for subsequent approval, the consideration of impacts can only be assessed in general terms, and against the height/ scale parameters included within the submissions.

The detailed landscape submissions within the Environmental Statement have included the collection of baseline information through a desk study and field surveys, including use of LANDMAP to identify important landscape receptors and inform the assessment.

The studies and visits confirm that the development site is visible both up close and in some areas up to 3km away, although the majority of local views are

restricted to existing properties, highways and public rights of way around the area.

Within this respect, it is notable that the core part of the 'base' as a whole is already built up and visible at distance, but has for many years formed part of, and been accepted as, the landscape character of the locality. Within this context, the majority of the development proposals 'within the wire' are considered to have a limited impact due to the existing historical and physical landscape character of this built up site, not least the super hangar.

With respect to the 'core' development at DTC, however, it is also clear that some of the buildings will be substantial, most notably the proposed energy centre (approximately 24m high with a 30m stack) and Mess building (up to 18 metres close to East Gate).

With respect to the energy centre, this will sit on a terraced area raised above the Eglwys Brewis Road and will be a highly visible element in the landscape, not least due to the 30m stack. Careful attention to design to ensure that it does not appear unnecessarily imposing or devoid of character will need to be paid at detailed design stage. The relationship of this building with the leisure centre at Picketston Sport will also be essential, given that both buildings are likely to create an informal 'gateway' to emphasise arrival at the DTC.

Although the Mess Building towards East gate will be set some distance from the site boundary, nevertheless the masterplan suggests a building of substantial depth and width which, at 18 metres maximum height, has the potential to be of significant mass to form a significant element in the landscape. Nevertheless, again close attention to architectural detail should ensure that this can become a landmark building, while it will be viewed within the wider context of a developed MOD facility such that its overall physical impact will be mitigated.

In contrast to development to the south of the NAR/ Eglwys Brewis Road, however, the development proposed at Picketston, will clearly have an impact on the landscape character of the site (both that area within the EMP 10 boundary and the areas of land currently outside the boundary and forming part of the countryside), which is presently much more open and rural in character, including many hedgerows/ traditional field boundaries. In this respect, although there are existing MOD buildings and activities at Picketston, the proposals will open up views of this land from the upgraded highway, and will introduce significant changes in the form of the new sports pitches, field training areas and, notably, the significant new leisure complex.

While the nature and, in some case, scale of these proposals will therefore have an adverse impact on the existing rural character of this part of the site, nevertheless it is considered that the majority of the site already forms part of the MOD base while, with sufficient attention to the landscaping of the site and its boundaries, as well as the quality of the final design of the leisure building, that this change to the character of the site would not be so demonstrably adverse as to render the scheme unacceptable, especially when considered against the ultimate rationale for siting the sports facilities and field activities in this area.

Whilst the representations that express concern at the change in character of the area and the visual impact of the development are noted, and ultimately the development will undoubtedly introduce changes both the built-up base and the more rural area of Picketston, nevertheless these changes are not considered to be unacceptably significant, nor would they cause harm to the wider landscape or landscape designations such as the Heritage Coast to the south from within which the development would be viewed.

In more general terms, the reserved matters applications will need to be supported by firm evidence of a site wide design approach for all buildings and facilities within the DTC. Submissions indicate (in outline) that typical materials being considered include light or 'white' render, limited brickwork/ blockwork, natural material cladding on key civic facades, limited timber/panel cladding, metal panel cladding, silver grey roofing, and white architectural metalwork.

Clearly these details, along with the composition of a range of civic and background buildings within the site will be an essential component of ensuring the successful integration / unification of the 'family' of buildings into the development as a whole, both when viewed from within and outside the base.

Construction Phase

During construction of the DTC, it is clear that there will be negative effects on the visual amenities of the locality, as a result of large scale development, viewed up close and at distance. Nevertheless, this is only to be expected for a development of such magnitude, and is not considered to materially affect the overall positive conclusions in respect of the development proposals.

Other Matters - Lighting

Given the intensity of the use and the potential impact upon night time views from nearby and at a distance, the provision of an appropriate lighting strategy will be important. A lighting strategy has been submitted which covers such matters (compliance with which can be controlled by condition) and addresses the need for "an aesthetically pleasing yet environmentally sensitive solution", while also referring to the need to control light pollution due to the existing runways.

23. AGRICULTURAL IMPACT

23.1 Land Quality

Planning Policy Wales seeks to conserve the 'best and most versatile' agricultural land (grades 1, 2 and 3a) as a finite resource for the future, stating that such land should only be developed if there is an overriding need for the development, and either previously developed land or land in lower agricultural grades is unavailable. Policy ENV 2 of the UDP similarly requires an 'overriding need' to be demonstrated before such development should be approved.

The Provisional Agricultural Land Classification (ALC) map defines the site as being predominately Grade 2, (however this grading dates back to 1977). The introduction of other factors to the ALC classification system in subsequent revisions have acted to downgrade much of the land previously recorded as grade

2 in the South Wales area. The applicants consultants have undertaken a series of ALC surveys in accordance with Ministry of Agriculture Fisheries and Food guidelines, which show that only three areas are recorded as containing land classified as Best and Most Versatile (BMV) agricultural land. These areas (Gileston/Old Mill and Castleton Farm areas together with an area near Llanmaes Brook along the route of the Northern Access Road) contain approximately 0.7, 3.4 and 0.7 hectares of BMV land respectively.

It is noted that these figures are different to those quoted in the original ES, but have since been confirmed by the applicants as more up-to-date and accurate representations of the full extent of BMV involved in these areas.

Following concerns that the information submitted was not supported by the background survey details or a specifically-targeted agricultural report for each (or both) applications addressing what surveys have been undertaken the applicants have submitted supplementary reports (one for each application site) to support and justify the ALC maps that accompany the applications. These incorporate the original survey findings and soil sampling results.

For the DTC application, the impact on BMV is limited to the following areas: -

- Castleton – within the field training area. No changes or irreversible development
- Gileston – along the route of the highway improvements
- Along part of the proposed route of Northern Access Road

It should be noted that although the golf course has not been assessed for its land quality, golf courses are not 'irreversible development' in Policy terms and, therefore, loss of BMV is not of concern in this area.

In considering the impact of the development on agricultural land quality, it is notable that the impact on Grade 3a land (BMV) is limited to 4.894 hectares (1.7% of the overall site) of which 1.466 Hectares (0.5%) is classed as 'irreversible development', these areas being the land affected for the NAR (0.740 hectares) and Gileston to Old Mill Road improvements (0.726 hectares).

The extent of land affected is therefore very small in proportion to the scale of development proposed (0.5% of the overall site), which is considerably less than the 20 hectares threshold which historically triggered the involvement of MAFF as potentially being of greater than local significance. It is therefore accepted as being below the threshold at which such loss would be regarded as being of national significance.

Nevertheless, this loss remains to be assessed against national and local policy concerning agricultural land quality, and in this respect the Policies referred to above are pertinent.

In this respect, while the loss of BMV is regrettable, the need for the proposed road improvements/ provision are accepted earlier in the report, while the alignment of the NAR is accepted as being constrained by the highway

requirements for the proposed B4265 junction to the west and the gap between Rose Cottage and Froglands Farm in the east.

Accordingly, it is concluded that there is both an overriding need for the development and that the development works affecting such land could not be accommodated on lower grade land in this vicinity for the reasons stated above. In this respect it is considered that the proposals do not pose a significant adverse threat to agricultural land such that there would therefore be no demonstrable breach of Policy ENV2 or National Policy in this regard.

23.2 Impact on Agricultural Holdings

To date there have been no specific objections from owners of land or tenants of landholdings affected by the DTC development stating objections on grounds that the development would adversely affect existing agricultural holdings. While WAG have carried out a survey / report on the impact on agricultural holdings (specifically related to Batslays farm (ABP)), this has no bearing on the DTC proposals (although it is noted that the owners of Batslays Farm have objected specifically to the DTC application on planning grounds). Accordingly, there are no obvious issues arising from the DTC application in this regard.

Accordingly, there are not considered to be any objections on matters relating to the impact on existing agricultural land holdings.

24 SECTION 106 ISSUES

24.1 Section 106 Issues (General)

In considering the need for planning obligations, the Council has assessed the development proposals, having regard to the national and local planning policy requirements. Your officers have also considered the responses to consultation, a number of which responses refer to the impacts on facilities and infrastructure. There have been a significant number of meetings and discussions held between your officers and the applicant on a range of measures which has resulted in the negotiation of a range of planning obligations. These obligations will be secured through a Section 106 agreement between all the interested parties. This section outlines those planning obligations, where necessary referring to areas that remain in disagreement and also highlights those areas to be dealt with by condition rather than legal agreement. Planning Policy Wales advises that if there is a choice between imposing conditions and entering into a planning obligation, the imposition of a condition is preferable. This is because conditions are seen to be more transparent, offer greater flexibility in the light of changing circumstances and offer a developer the right of appeal to the Assembly against those conditions considered to be onerous.

There are general planning obligations which are relevant to the development proposals in their entirety. These are outlined below.

24.1.1 Transport

The application is supported by a Transport Assessment including a Transport Implementation Strategy and Travel Plans for the DTC, ABP and construction traffic, which has been considered earlier in the report at section 15. There are various highway works and sustainable transport facilities required as a result of the development which will be secured either by condition, section 106 agreement or Highway Agreement.

24.1.2 Highway Matters

There are a number of highway improvement works proposed which are required as a result of the development:

- Provision of the Northern Access Road
- Improvements to Eglwys Brewis Road
- Improved traffic signals on B4265 at Llanmaes / Llantwit Major Junction
- New traffic signals on B4265 at Gileston Cross / St. Athan Junction
- Road improvements on B4265 at Gileston to Old Mill, Aberthaw
- Junction improvements at Weycock Cross, Barry

These will be the subject of separate highway agreements to specify the detailed design and delivery mechanisms. However, in view of the fact that these works are required to be carried out in advance of other parts of the development, it is necessary to control the phasing of the delivery of the highway works. This will be done through conditions rather than the section 106 agreement.

In addition, the agreement will include a clause in respect of the requirement for Traffic Regulation Orders to be administered and implemented where necessary at the developer's expense.

24.1.3 Construction Traffic Impact

The Eglwys Brewis Road route is a recognised walking route to school linking the community of West Camp and Eglwys Brewis to primary and secondary schools in Llantwit Major. The Council, as Local Education Authority does not have a statutory duty to provide free school transport for the pupils who live in the area and can walk to school via a safe route. However, with the additional heavy vehicles and construction traffic arising directly from the development, it is possible that the route will be deemed unsafe for a temporary period, when assessed in accordance with the identification of hazardous routes to school guidelines. This may have implications for the provision of home to school transport to Llantwit Major Secondary School and St. Illtyd's Primary School which would have to be provided whilst construction is taking place. This cost, which arises directly as a result of the development, should be borne by the developer not the tax payer.

Your officers therefore recommend a clause in the legal agreement that will require the developer to fund the undertaking of an assessment of the walking route, during the construction period to assess the safety of this walking route. The legal agreement will also place an obligation to pay the Council a relevant contribution or carry out any necessary improvement works if the construction of

the development causes the existing route to be deemed unsafe as a result of that construction, either to provide school transport to the eligible pupils or make the route safe.

24.1.4 Sustainable Transport

Local and national planning policies emphasise the need for developments to be accessible by alternative modes of transport other than the private car. Therefore, it is essential that facilities are provided or enhanced for sustainable transport (i.e. for pedestrians, cyclists and public transport patrons) serving the site. A number of measures for sustainable transport are detailed earlier in the report at section 15. These have been negotiated during the application process by your officers and will in the main be secured through relevant conditions.

However, the section 106 agreement will include clauses to secure the provision of the following sustainable transport facilities serving the development:

- A dedicated shuttle bus service to link DTC Gate 1 with Llantwit Major Train Station, for rail passengers between the hours of 07.00 and 19.00 on working days (i.e. every day except Saturday, Sunday and Bank Holidays) for 25 years from DTC opening date. This service will operate as a public service and will be available for use by all passengers with a valid rail ticket;
- A fund of £30,000 to enable the undertaking of traffic surveys to analyse the impact of the development on the road network, in the vicinity of the development** (the impact of the development on the more 'minor roads' in the area are matters that have been raised in local representations);
- A fund of £250,000 for highway improvement and/or traffic management measures which are deemed necessary as a result of the survey analysis to mitigate the impact of the development on the road network in the vicinity of the development* (the impact of the development on the more 'minor roads' in the area are matters that have been raised in local representations);
- Enhance the existing footway on the western side of Cowbridge Road from the junction of St Athan Road / Cowbridge Road and unnamed road to upgrade it to a shared cycleway / footway linking south into St. Athan village and St. Athan Primary School and enhancements to the crossing point on Cowbridge Road near the entrance to the Golf Course up to a maximum cost of £100,000 (DTC only);
- DTC and Construction Travel Plans - make provisions for representatives of the Council to be invited to sit on the Travel Plan Management Board, the appointment of Travel Plan Coordinator(s), and putting in place appropriate reporting mechanisms.

These are considered to be necessary planning obligations rather than conditions principally because they relate to financial matters or are more detailed than would be included within conditions, or will be provided over a long period of time.

24.1.5 Recreational routes (PROW)

The Council's Public Rights of Way (PROW) Officer has identified a number of public footpaths in the vicinity of the development site which are likely to be used

for recreation purposes by the new population of the DTC. A contribution of £92,000 has been sought to provide improvements to the PROW network to meet this additional demand. Works to footpaths 5, 6, 7, 8, 9, and 10 (at St. Athan), 1, 2, 3, 4 and 5 (at Flemingston), 1 (at Eglwys Brewis) and 12 (at Llancarfan) have been identified, including replacement of stiles, erection of hunting or kissing gates, waymarker posts, resurfacing, vegetation clearance, new steps, footpath extensions, and information boards.

TAN 16 (Sport, Recreation and Open Space) emphasises the importance of public rights of way, and states that local planning authorities should seek to promote and provide better facilities for walkers, cyclists and horse riders. It states that planning obligations can be used to safeguard and enhance existing recreational facilities such as rights of way, which will usually be justified when the quantity or quality of provision is inadequate, or under threat, or where new development increases local needs (paragraph 4.15 refers). Therefore, in view of the large increase in population in the area directly resulting from the proposed development, it is considered appropriate to seek a contribution for off-site improvements to the PROW network to meet these additional needs.

The developers have agreed to make a joint contribution of £20,000 (for ABP and DTC) on or before the commencement of the development to enhance the PROW network in the vicinity of the site. Whilst this falls short of the initially requested £92,000, it is noted that a number of off-site works are to be secured through conditions. These include the enhancement of the steps onto the B4265 which link to footpath No. 40 to be DDA compliant. Furthermore improved provision for disabled access to the PROW as part of the highway works at Gileston to Old Mill, is to be secured, which is likely to involve a significant cost to the developer. As a consequence, these proposals are considered to be sufficient to satisfy the relevant planning policies in respect of recreational routes.

24.1.6 Public Art

The Council has a percent for art policy which is supported by the Council's adopted supplementary planning guidance on Public Art. On major developments, developers are required to set aside a minimum of 1% of their project budget specifically for the commissioning of art and, as a rule, public art should be provided on site integral to the development proposal. In this case, the public art policy applies to the entire development. As the proposal is in outline, the Section 106 Agreement will require the future submission of build costs to calculate the value of the public art contribution and requiring the future submission of a public art strategy to show how the contribution is being implemented on the site.

In discussions, the developer and your officers have agreed that a number of the elements of the development proposals may well fall under the umbrella of public art. By way of examples, elements may well include artwork within the heritage park, performance areas within the site, the army band and the museum (where it is used to create or display works of art). It is therefore anticipated that public art will be provided as an integral part of the development. In addition a condition is recommended requiring the reserved matters application(s) to be supported by a public art strategy.

24.1.7 Waste

The DTC will make provisions to store and dispose of all the waste arising from within the wire and therefore there will be no additional burden on the Council's waste services from the DTC. The SFA will be served by the Council's domestic waste services and a condition is recommended requiring the developer to provide recycling facilities for the occupiers of the SFA. Such facilities may include green boxes for recyclables, compost bins, green bags for green waste, kitchen waste containers, small kerbside caddies and leaflets about recycling and waste collection. As a consequence, there are no planning obligation requirements in respect of waste management, these being matters that can adequately be dealt with by condition.

24.1.8 Leisure and recreational facilities

The development proposals include substantial sports and recreation facilities west of Picketston, including an 8-lane 25m swimming pool, a 12-court sports hall with retractable seating for 800 people, a fitness suite, squash courts, an 8-lane all-weather athletics track & pitch, a café, coach and car parking, and 12 outdoor sports pitches (4 floodlit, 2 all weather surfaces).

The applicants have indicated that during core hours and for key events, these facilities will be used by military personnel only. However, outside these times the facilities will be able to be used by service families and the wider public. At this outline stage, it is not appropriate to specify the exact arrangements for public access to these facilities. Therefore, the section 106 agreement will contain clauses requiring the approval of a management plan containing the arrangements for public access to the leisure facilities.

The section 106 agreement will also make provision to ensure that the leisure facilities are provided prior to the DTC opening date.

24.1.9 Town / Village Centre Enhancement

The proposed development will significantly increase the resident and working population of St. Athan and this will have both positive and negative impacts on the surrounding towns and villages. The positive benefits will include additional consumers using shops and services in the locality, which will benefit local economies. However, this increased use of the town and village centres could also have potentially negative affects on the public realm within these centres and increase the need for additional facilities such as seating, litter bins, CCTV, lighting, cycle parking and open space. Strategic UDP Policy 9 states "The vitality, attractiveness and viability of existing town, district and village shopping facilities will be protected and enhanced." In view of the scale of the development, it is considered reasonable to seek a contribution towards improvement and regeneration of the local centres within the vicinity of the development to ensure that the positive impacts of the development are maximised and the potentially negative impacts mitigated.

The developer contends that the development will not have a negative impact on nearby towns or villages and that a contribution of this kind cannot be justified on the back of this development. Therefore, they have declined to agree to make

such a contribution. Whilst, this is regrettable, it is not considered that it would justify the refusal of planning permission on these grounds in view of the significant wider positive impacts the development will have on the local economy. In this regard it is accepted that the development will provide a range of facilities in the area and result in investment through employment. As a consequence the Section 106 legal agreement will not include a clause requiring such a fund.

24.2 Section 106 Issues (Service Family Accommodation)

There are a number of planning obligations that specifically relate to the 483 units of service family accommodation (SFA) in light of the nature of that type of development in this location.

24.2.1 Occupancy restrictions

In view of the fact that the proposed SFA units are necessary to serve the future needs of the staff and families of the Defence Technical College (DTC), the dwellings are justified as a departure from planning policy, as detailed within the body of this report. Therefore, it is necessary to restrict the occupancy of the SFA units, on occupation, to persons and their families associated with the DTC and/or MoD. The section 106 agreement will also include clauses for the subsequent monitoring of occupancy of the SFA as well as protocols for reporting the disposal of the SFA units should they become surplus to requirements.

24.2.2 Affordable Housing

UDP Policy HOUS 12 requires all residential developments of more than 50 units to provide a reasonable element of affordable housing. In light of the latest evidence on housing need in the Vale of Glamorgan, the Council now seeks to achieve 30% affordable housing provision on substantial development sites. The Council also has Supplementary Planning Guidance on Affordable Housing and Planning Obligations. In view of the fact that the SFA will have occupancy restrictions to only those persons connected with the DTC, the view has been taken that it is not appropriate to seek affordable housing at the outset of the development, given the bespoke or initially tied nature of the housing. This is considered to be both pragmatic and reasonable.

Nevertheless, provisions must be made to secure affordable housing in the event that the SFA becomes surplus to the operational requirements of the DTC and is subsequently used or disposed of as open market housing. In the event of the SFA being used or disposed of, either in part or in totality, the housing ceases to become bespoke or tied housing. In this case, there must be a mechanism for the provision of affordable housing, as would be the case in any other 'general' housing development. Such a requirement has been made clear to the applicants from the commencement of discussions. In this regard the applicants have been fully advised of the national and local policy context, as well as provided with specific data and analysis of the need for affordable housing in the Vale of Glamorgan.

Following lengthy discussions and negotiations the applicants have accepted that the section 106 agreement will make appropriate provisions for securing affordable housing.

In terms of details, your officers have offered a number of approaches, ranging from specifying details on the number, type and tenure of affordable housing to be provided at this juncture or alternatively through the use of review points. In this regard the MoD has expressed the preference for specifying requirements at this stage. As a consequence, the agreement will make provision for 30% affordable housing as a percentage of the total number of units disposed. This provision will be made on site, or in order to provide flexibility, off site if a suitable alternative can be agreed. It will also make provision for a financial contribution in lieu of on site provision, as a fall-back if an affordable housing provider or purchasers cannot be secured having used all reasonable endeavours.

Having accepted the principle, the MoD has expressed the view that the clause to provide affordable housing should cease to have effect after a set period, after which they would be free to dispose of the SFA dwellings on the open market without providing any affordable housing. Your officers have however consistently advised that the clause should exist in perpetuity, which is the standard approach taken in the provision of affordable housing.

Members are fully aware that the delivery of affordable housing is a key policy of the WAG, which national policy is reflected in the Council's planning and housing policies. The approach is also consistent with the advice contained in the MIPPS on Housing (01/2006) and TAN 2: Planning and Affordable Housing (2006).

A number of consultation responses have expressed concern at the development of the SFA sites, pointing to the history of former MoD housing in the area that has been disposed of and as a consequence no longer being available to serve the needs of this development.

Negotiation on this issue has continued during recent weeks and the MOD have recently advised that they acknowledge the situation and that they wish to see the matter progressed to Committee on the 24th September. I am therefore confident that this matter is resolved and it is for the above reasons that the recommendation includes a requirement for the provision of affordable housing, which clause being in place in perpetuity.

24.2.3 Education

UDP Policy HOUS 8 sets a series of criteria against which new residential developments should be assessed. It states that adequate community and utility services must exist to serve new residential developments; this includes education facilities.

In view of the fact that the SFA is specifically making provision for service personnel with families, it is not appropriate to apply the Council's usual formula for calculating pupil numbers (as detailed in the Planning Obligations SPG) which is based on average household size throughout the Vale of Glamorgan including single person and non-child households. The Ministry of Defence has therefore provided information about the average number and age of pupils currently housed at other SFA sites throughout the UK, to inform the calculation of pupil numbers specific to this development. Whilst accepting that the figures are purely estimates and need to be treated with some caution, based on this information, it

is estimated that the SFA will house an average 1.7 children per dwelling (totalling 821 children). The submitted data further estimates that 30% (246) will be aged 0-5 years, 36% (296) will be aged 5-11 years and the remaining 34% (279) will be aged over 11 years. The Council as Local Education Authority has a statutory duty to provide education provision for children aged 3 years and over. Based on the Vale of Glamorgan's latest mid-year population estimates (2007), approximately 12% (99) of the children will be aged 3-5 years.

The Council would usually expect a proportion of the school-aged population (around 11%) to attend welsh medium school (in this case Ysgol Iolo Morganwg for primary aged pupils). However, the Ministry of Defence have advised that it is highly unlikely that any children from the SFA will attend welsh medium schools. This is because of the specific nature of the DTC and the fact that the service personnel and their families will only live at St. Athan in the short and medium term and will then be relocated elsewhere. Therefore, in the interest of consistency in education it is considered they would, as a rule, attend English medium schools. It is considered that this is a logical assumption to make given the unique circumstances of the SFA occupiers.

The golf course site (172 units) is served by St. Athan Primary School. The remaining SFA sites (311 units) are served by the catchment school St Illtyd Primary School. In addition, it is considered likely that parents would request places in nearby Eagleswell Primary School and Llanilltud Fawr Primary School in Boverton and Llantwit Major respectively, given the proximity to the SFA sites. Furthermore, approximately 11% of the children would be expected to seek denominational education, which would be Wick & Marcross Primary School in this case.

All the SFA sites are served by Llantwit Major School for secondary school education and either St. Richard Gwyn School or Bishop of Llandaf High School for secondary age denominational education.

Officers have provided the following estimates of spare capacity within the relevant schools at 2014 which is the anticipated date for occupation of the SFA dwellings

School	Estimated spare capacity at 2014
St Athan Primary	59
St Illtyds Primary	68
Wick & Marcross Primary (denominational)	15
Eagleswell Primary	3
Llanilltud Fawr Primary	10
Total Primary School capacity	155
Llantwit Major High School	88
St. Richard Gwyn Secondary School (denominational, approximately 31 required)	31+
Total Secondary School capacity	88 + 31

This information shows that there is insufficient capacity within existing nursery / primary and secondary schools to accommodate the additional demand. In order to ensure that there are sufficient school places to meet the future demand created by the additional school aged children to be housed in the SFA, the section 106 agreement will secure a financial contribution to pay for the necessary works to make the necessary additional places available whilst having regard to existing spare capacity.

The development includes the provision of a crèche, which may satisfy some of the above requirement for education, particularly for those 99 children aged 3-5yrs. Provided that the standard of education meets the local education authority's requirements, these places can be counted against the additional demand and therefore no contribution would be sought. The developer has suggested a clause in the section 106 agreement which places an obligation on them to provide the necessary number of nursery places for those children who cannot be accommodated within the existing spare capacity in publicly funded nursery schools, which is considered to be satisfactory.

24.2.4 School Transport

The Council has a statutory duty to provide free home to school transport for primary school pupils where the walking distance to school (along a safe route) is more than 2 miles and for secondary aged pupils where the distance to school (along a safe route) is more than 3 miles. St. Athan Primary, Eagleswell Primary, Llanilltud Fawr Primary, and Llantwit Major Secondary schools are all under the specified distance and therefore there is no statutory requirement for school transport provision to these schools. Instead the developer will be expected to make provision for improved walking and cycling routes as outlined above (section 15 refers).

However, St. Illtyd's Primary, Wick and Marcross Primary, St. Richard Gwyn Secondary and Bishop of Llandaf Secondary schools are over the 2 and 3 mile respective distances from the SFA. Therefore, it is considered reasonable, that the developer should meet the initial costs of providing this essential school transport. Therefore, an appropriate contribution will be required to initially provide school transport to those pupils who will live in the SFA who have a right to free school transport.

24.2.5 Public Open Space

UDP Policy REC 3 sets out the requirements for public open space provision on new residential developments. The 4 parcels of Service Family Accommodation (SFA) each provides areas of formal and informal public open space on site to serve the needs of future occupiers. The indicative site layouts show sufficient onsite provision to satisfy the policy requirements of UDP policy REC 6 for children's playing space and this will be secured by condition. Whilst the sites do fall short of the minimum overall public open space requirement under UDP policy REC 3, regard must be paid to the additional open space and recreational facilities which are being provided as part of the development proposals. This provision will further satisfy the recreational needs of the future occupiers of the SFA. Therefore, it is considered that the overall level of public open space to be provided on site as part of the SFA development is acceptable and there is no

need for an additional contribution in lieu of on-site open space provision in this case.

The applicants have indicated that the areas of public open space to be provided on site will be managed and maintained by them, rather than being transferred or adopted by the Council. Therefore, there are no commuted sums for maintenance in this case. However, a condition is recommended requiring provision of a management plan for the areas of open space to be submitted for approval by the Council as Local Planning Authority.

Given the above, your officers are satisfied that , there is no need for any planning obligations to be included in the section 106 legal agreement in respect of public open space provision.

24.2.6 Community facilities

The development proposals include the provision of leisure and recreational facilities in and outside the wire, cultural facilities, primary medical and dental care services, a crèche, community facility, library services and social facilities such as cafés, bars, shops etc. These facilities will be accessible to military personnel and, in some cases, their families. Therefore, it is considered that the development proposals as a whole will not have a significant impact upon existing community facilities in the wider area and therefore contributions to provide additional community facilities are not deemed as necessary in this case. A phasing condition will ensure that the on-site community facilities are provided in a timely manner.

24.3 Conclusion on Section 106 Planning Obligation Matters

It is considered that the section 106 planning obligations, when considered and delivered alongside those facilities and services to be provided in kind and secured through planning conditions, are sufficient to properly mitigate the impacts of the proposed development, and to serve the needs of the future occupiers of the development. Therefore, when taken as a whole it is considered the development complies with the Circular (13/97) on Planning Obligations, the advice in Planning Policy Wales, the relevant TANs and the Council's own policies contained in the Vale of Glamorgan Adopted Unitary Development Plan 1996-2011 and Planning Obligations SPG.

The one area where there remains a divergence of opinion is due to the apparent reluctance or unwillingness of the MoD (as applicant for the DTC) to accept the need to ensure the delivery of affordable housing in perpetuity in the event of the disposal of SFA. This is highly regrettable, given the pragmatic manner in which the Council has approached the subject of SFA to date. Members will also be aware of the clear policy commitment at national and local level for the planning system to deliver affordable housing. Any agreement must, in your officers' opinion include a clause that requires the delivery of affordable housing in perpetuity.

25 PHASING ISSUES

Members will note from the details analysis of the proposal that the phasing of various aspects of the development will be critical not only to manage construction and the associated impacts but also to mitigate the impacts of the development on various interests of acknowledged importance. In this regard a number of conditions are recommended to deal with the following areas:

- Demolition processes and the reuse and disposal of arisings.
- Construction program.
- Construction traffic
- Phasing of elements of the development, with particular regard to the timing of the construction of the NAR, off site highway improvements and the SFA.
- Plans to detail measures to mitigate the environmental and ecological impact of the proposals. Both are required to protect residential amenity as well as ecological interests.

Members should note that the scheme insofar as it relates to the vast majority of the built development is in outline form and a number of these conditions relating to phasing are imposed now to ensure that such matters are addressed in the approval of reserved matters and subsequent detailed submissions.

26 CONCLUSION

The proposal is both significant and complex. The legislative context for reaching a decision is nevertheless straightforward, in that decisions are made in accordance with Section 38 of The Planning and Compulsory Purchase Act 2004, which requires that, in determining a planning application the determination must be in accordance with the Development Plan unless material considerations indicate otherwise. The Development Plan comprises the Vale of Glamorgan Adopted Unitary Development Plan 1996-2011.

As stated in the report the redevelopment of the site for a military college establishment can be considered to fall within the spirit of the UDP (policy EMP 10 refers). The proposal in its entirety does however extend beyond the UDP reference to EMP 10 particularly the NAR and elements of the SFA and proposals at Picketston and Castleton. In view of the above, the report and your officers' analysis has focused initially on the principle of the development and in particular the rationale for the scheme in its entirety as well as those elements that represent a departure from the adopted UDP.

The policy section of this report advises of the status of the St. Athan area both in terms of the WSP and ongoing work on the LDP. It is acknowledged that reference to St. Athan as a strategic opportunity area within the WSP is material. In this regard the concept is one that is supported by the WAG not only given the reference in the WSP but also given that the ABP proposals have actually been submitted by WAG ministers.

The proposals have also been adopted as a key action in the Councils Corporate Plan (R5 refers). The proposals, when taken together (DTC and ABP) would make a significant contribution to the local and regional economy. The case for the development has been emerging since the preparation work for the bid by the relevant parties, as part of the MOD defence training rationalisation programme. This included the production of a development brief for the site which brief makes reference to new access arrangements and SFA as well as the field training requirements. This brief was subject to public consultation and has been adopted by the Council.

Whilst the LDP is in the course of production and the adopted plan constitutes the UDP, the direction of travel of the LDP clearly has regard to the WSP, the Councils Corporate Plan and recognises the role of St. Athan. The key question is therefore whether there are justifiable reasons why permission should be granted now and the scheme progressed in advance of the LDP. One important material factor is the Defence Training Rationalisation Programme is currently underway and St. Athan has already been identified as the preferred location to deliver inter-services training into the future. This programme has specified timescales outside the control of the Council and involves a national (GB) reorganisation of defence resources.

If the planning authority considers the above in conjunction with the UDP position (which identifies the majority of St. Athan as a development opportunity), it is clear that the elements of the scheme which fall outside of the UDP allocation and are thus departures from the approved plan are integral to the scheme as a whole. In addition if the Council were minded to reject the proposal on the basis that it is premature pending the completion of the LDP, it would have to demonstrate that the proposal goes to the heart of the plan and how the grant of permission would prejudice the outcome of the plan process as a whole. In this instance St. Athan is highlighted within the WSP and it is a requirement that the Council's LDP has to have regard to the WSP.

Nevertheless your officers have assessed the scheme both in terms of its totality and individual elements. This assessment has included a consideration of alternatives, put forward in respect of the NAR and the SFA and it has been concluded that the proposals as submitted represent the most appropriate options notwithstanding their acknowledged impacts, particularly having regard to sustainability and the need to secure appropriate access arrangements to a scheme of this size. As stated above, the economic benefit of the scheme is also material. It is therefore accepted that the benefit of a successful development can help secure investment and employment within the Vale of Glamorgan and beyond. Given the UDP reference to EMP 10, other policy support for the strategic role of St. Athan (WSP) and the content of the St. Athan development brief, the clear economic benefits outweigh any harm the development may have upon interests of acknowledged importance as amplified in the report above or any of the public objections raised. In light of the mitigation proposed and suite of measures required through agreement and by condition, your officers conclude that planning permission ought to be granted.

Having regard to the Wales Spatial Plan, Planning Policy Wales and associated Technical Advice Notes, and the Policies contained within the Vale of Glamorgan Adopted Unitary Development Plan 1996-2011, it is concluded that the proposed development, while having acknowledged impacts, would nevertheless bring clear benefits which outweigh any harm caused by the development and its failure to fully accord with the Adopted Unitary Development Plan, provided the suite of measures required through agreement and by condition are implemented.

27 RECOMMENDATION

That the application be referred to National Assembly for Wales under Town and Country Planning (Development Plans and Consultations)(Departures) Directions 1992 and be advised of the Councils intention to grant planning permission.

That provided the National Assembly for Wales does not wish to intervene in the determination of the application, subject to the interested person(s) first entering into a Section 106 legal agreement to include the following necessary planning obligations:

- The developer shall either pay to the Council the cost of providing **school transport** to existing pupils whose route to school is deemed unsafe as a result of the additional construction traffic from the development, or undertake any works necessary to make the route safe.
- The developer shall make provisions to improve **sustainable transport** serving the Development in the form of:
 - A dedicated shuttle bus service to link DTC Gate 1 with Llantwit Major Train Station,
 - A fund of £30,000 for traffic surveys to analyse the impact of the development on the road network in the vicinity of the development*
 - A fund of £250,000 for highway improvement and/or traffic management measures which are deemed necessary as a result of the survey analysis to mitigate the impact of the development on the road network in the vicinity of the development*
 - Enhance the existing footway on the western side of Cowbridge Road from the junction of St Athan Road / Cowbridge Road and unnamed road to upgrade it to a shared cycleway / footway linking south into St. Athan village and St. Athan Primary School and enhance crossing point on Cowbridge Road near the entrance to the Golf Course up to a maximum cost of £100,000 (DTC only).
 - DTC and Construction Travel Plans
- The developer shall pay a contribution of twenty thousand pounds (£20,000) to the Council to provide or enhance access to the **public right of way network** in the vicinity of the development*
- 1% of the build costs shall be allocated for the provision of **public art**
- The developer shall be required to submit for approval a management plan outlining arrangements for public **access to the leisure facilities**.

- **Phasing** obligation to ensure the **leisure facilities** are provided in a timely manner to serve the occupiers of the SFA and SLA
- **Occupancy of the SFA** to be restricted to persons (and their families) connected with the DTC.
- In the event that the SFA is released as open market housing, 30% shall be secured as **affordable housing**, which clause shall be relevant in perpetuity.
- A contribution shall be paid to provide or enhance **educational facilities** in the area to meet the additional demand created by the proposed development, which cannot be met within existing spare capacity.
- A contribution shall be paid to provide **school transport** to meet the initial additional demand created by the proposed development.
- The legal agreement will include the standard clause requiring the payment of an **administration fee of £50,000** to cover the Council's costs of, monitoring and implementing the agreement (the developers will be invoiced separately for the councils costs to date in respect of negotiations).*

* Unless stated otherwise, where financial contributions are proposed, the amount quoted relates to the total required in respect both developments (DTC and ABP) combined (not individually).

THAT the application be approved subject to the following conditions:

Time Limits / Controls

1. The development to which this permission relates must be begun not later than whichever is the later of the following dates:
 - (a) The expiration of five years from the date of this permission.
 - (b) The expiration of two years from the date of the final approval of the reserved matters or, in the case of approval on different dates the final approval of the last such matters to be approved.

Reason:

To comply with the requirements of Section 92 of the Town and Country Planning Act 1990.

2. Save in respect of the detailed highway works approved as part of this application, approval of the details of the layout, scale, appearance, access and landscaping of the development (hereinafter called 'the reserved matters') shall be submitted to and approved by the Local Planning Authority before the relevant part of that development is commenced.

Reason:

To comply with the requirements of Section 92 of the Town and Country Planning Act 1990.

3. Application for approval of the reserved matters hereinbefore referred to must be made not later than the expiration of five years beginning with the date of this permission.

Reason:

To comply with the requirements of Section 92 of the Town and Country Planning Act 1990.

4. Details submitted in compliance with condition 2 above shall be in substantial accordance with the Masterplan documents (reference SA-COXXX-TP-900-SB-X-4000) accompanying the application

Reason:

Since the scale and nature of development proposed within the Masterplan documentation forms a significant part of the Council's determination of the proposals as a development of major significance which justifies the approval of the development as a departure from the Adopted Unitary Development Plan.

5. The development hereby permitted shall be used for the purposes specified within the application and supporting documentation and for no other use whatsoever unless otherwise agreed in writing with the LPA.

Reason:

The supporting information refers specifically to the use of the site as a Defence Technical College and associated facilities and any alternative use may have a significantly different impact which would need to be properly assessed and to ensure compliance with all relevant polices within the Unitary Development Plan.

Phasing

6. No development shall commence until a phasing plan has been submitted to and approved in writing by the LPA, which plan shall fully detail the timescale for implementation of the development, including all demolition works. The plan shall have particular regard to the timing of the construction of the NAR and other highway works in advance of the DTC main works (including the SLA and SFA), the energy centre, and any off site infrastructure requirements, the provision of sports and leisure facilities, museum and community facilities, the development shall thereafter be carried out in accordance with the phasing plan, unless otherwise agreed in writing by the Local Planning Authority.

Reason:

To ensure the satisfactory timing of the development of the site and having regard to the principle of sustainable development and the need to limit impact on the surrounding communities, to comply with the requirements of strategic policy 2 and ENV 27 of the Unitary Development Plan and the Vale of Glamorgan Supplementary Planning Guidance on Sustainable Development.

7. Prior to any demolition taking place on site a scheme of demolition shall be submitted to and approved in writing by the LPA, which plan shall fully detail the timescale for the demolition, the methods of treatment of demolition material and any proposals for the reuse, the demolition shall thereafter be carried out in accordance with the scheme unless otherwise agreed in writing by the Local Planning Authority.

Reason:

To ensure the satisfactory timing treatment of demolition materials, having regard to the principle of sustainable development and the need to limit impact on the surrounding communities, to comply with the requirements of strategic policy 2 and ENV 27 of the Unitary Development Plan and the Vale of Glamorgan Supplementary Planning Guidance on Sustainable Development.

Sustainability

8. The development shall be undertaken in substantial accordance with the submitted Sustainability Statement, and each Reserved Matters Submission required by condition 3, shall be accompanied by a statement demonstrating how each element of the development accords with the approved Sustainability Statement.

Reason:

To ensure that the development represents an exemplar sustainable development, and to accord with the requirements of Strategic Policy 2 and Policy ENV 27 of the Adopted Unitary Development Plan.

9. Each residential unit hereby permitted shall be constructed to achieve a minimum Code for Sustainable Homes Level 4 in accordance with the requirements of Code for Sustainable Homes: Technical Guide April 2009 (for the avoidance of doubt residential unit includes all single living accommodation units and all dwellings identified as falling within the single family accommodation sites hereby approved).

Reason:

To comply with the requirements of strategic policy 2 and ENV 27 of the Unitary Development Plan and the Vale of Glamorgan Supplementary Planning Guidance on Sustainable Development.

10. Each new non-residential building hereby permitted shall be constructed to achieve a minimum Building Research Establishment BREEAM (or subsequent equivalent quality assured scheme) overall 'Excellent' and each non-residential building refurbished as part of the scheme will achieve a minimum Building Research Establishment BREEAM (or subsequent equivalent quality assured scheme) overall 'Very Good'.

Reason:

To comply with the requirements of strategic policy 2 and ENV 27 of the Unitary Development Plan.

11. The details required in connection with condition 2 above shall include full details of secure/ covered parking on site for bicycles throughout the development, including facilities within each area of Service Families Accommodation, and such approved scheme of bicycle parking shall be fully implemented on site prior to the first beneficial occupation of the part of the development to which that facility relates.

Reason:

To ensure that satisfactory parking for bicycles is provided on site to serve the development, in the interests of encouraging sustainable transport, and to ensure compliance with the terms of Policy ENV27 of the Unitary Development Plan.

12. The details required in connection with condition 2 above shall provide for an Energy Centre in general accordance with the details submitted as part of the application, and the energy centre shall be provided on site in full accordance with such approved details and in accordance with the agreed phasing plan.

Reason:

In the interests of sustainability and to ensure that the energy centre is provided on site to contribute to the energy needs of the development.

Traffic & Transport

13. No work whatsoever shall commence on the construction of the Northern Access Road approved by this permission until such time as formal confirmation has been received in writing from the applicant / Ministry of Defence that the Defence Technical College (in its submitted form) is to proceed, and that a contract for the undertaking and financing of such development has been signed.

Reason:

Since the development of the Northern Access Road has been justified on the basis that it is strictly necessary to mitigate the highway impacts of the development, and it is therefore unacceptable to allow its construction until such time as LPA has been given satisfactory assurances that the project will be undertaken at the site.

14. Notwithstanding the proposed Construction Traffic Routes submitted, prior to any construction commencing on site a detailed Heavy Goods Vehicle and Large Goods Vehicle route plan for construction and associated delivery vehicle movements, throughout the life of the construction of the development, shall be submitted and approved in writing by the Local Planning Authority. Thereafter, the construction and associated delivery vehicles shall only use the permitted routes in accordance with the agreed details.

Reason:

In the interest of highway safety and to maintain the effective operation of the local highway network, in accordance with UDP Policy TRAN 11 (Road Freight).

15. Prior to commencement of any construction a scheme for the temporary signing and direction of traffic during the construction of the development shall be submitted and approved in writing by the Local Planning Authority and shall thereafter be implemented in accordance with the approved details prior to the commencement of construction.

Reason:

In the interest of highway safety and to maintain the effective operation of the local highway network, in accordance with UDP Policy TRAN 11 (Road Freight).

16. Prior to the commencement of any work on site details of a scheme for the washing of wheels of vehicles leaving the site (at any point where such traffic meets the public highway) shall be submitted to and approved in writing by the Local Planning Authority and the approved scheme of wheel washing shall be fully implemented on site before any site clearance commences and shall thereafter be so retained on site for the duration of the development works unless the Local Planning Authority gives written consent to any variation.

Reason:

In the interests of highway safety and to meet the requirements of Policy ENV27 of the Unitary Development Plan and to ensure effective measures which shall include interceptors and wheel washing facilities shall be taken to prevent transmission of material from the site to the public highway.

17. The proposals contained in the Construction Travel Plan shall be implemented in accordance with the submitted details. An annual monitoring report shall be submitted to the Local Planning Authority 12 months after commencement of the development, and every year thereafter until the substantial completion of the development, which report shall include targets, success criteria and results of the Travel Plan implementation. If the Travel Plan fails to meet its targets, the developer shall review the Travel Plan within 3 months of the submission of the monitoring report identifying the failure and submit an amended plan for the written approval of the Local Planning Authority, which shall thereafter be implemented in accordance with the approved details.

Reason:

To promote sustainable travel options for construction workers, to reduce the traffic impact on the local highways and to enable the Local Planning Authority to assess the impact of the Travel Plan.

18. Prior to any construction commencing on the Northern Access Road or Defence Technical College, the highway safety improvements to Eglwys Brewis Road, shown on Plan No. 003622/PA/650, shall be completed in accordance with the approved details.

Reason:

To provide adequate means of access to the site for the purpose of construction and in the interest of highway safety, in accordance with UDP Policy ENV 27 (Design of New Developments).

19. Prior to the commencement of core training activities at the new Defence Technical College (meaning the date at which students first arrive at the College for purposes of training, but with the exception of those at the existing 4 School of Technical Training), the Northern Access Road shall be constructed in its entirety in accordance with the approved details which shall be subject to a highway agreement between the developer(s) and the Council as Highway Authority under section 38 and 278 of the Highway Act 1980.

Reason:

To provide adequate means of access to the site and in the interest of highway safety, in accordance with UDP Policy ENV 27 (Design of New Developments).

20. The applicant shall ensure that accurate records are maintained relating to the number of vehicular movements associated with construction and construction delivery (HGV and LGV) vehicles accessing the development site on a daily basis, and such records/ logs shall be made available for inspection by the Local Planning Authority within 1 week of the Local Planning Authority making a request in writing to inspect such logs.

Reason:

To allow the local planning authority to establish the number of construction and delivery vehicles accessing the development site as a whole (reflecting the joint Transport Assessment), and in order that the Council may respond to any concerns in respect of highway safety and traffic management in the interests of the effective management of traffic in the vicinity of the site.

21. The details required in connection with condition 2 above shall include full engineering drawings, dimensions, levels and drainage details of the Waycock Cross Junction Improvement, and the approved junction improvements shall thereafter be completed in accordance with the approved details prior to the commencement of core training activities at the new Defence Technical College (meaning the date at which students first arrive at the College for purposes of training, but with the exception of those at the existing 4 School of Technical Training).

Reason:

In the interest of highway safety and to maintain the effective operation of the local highway network, in accordance with UDP Policy ENV 27 (Design of New Developments).

22. Prior to the peak in the number of construction and construction delivery (HGV and LGV) vehicles (which is defined as more than 200 deliveries a day) accessing the combined development site (relating to the Aerospace Business Park and Defence Technical College sites), the Gileston to Old Mill highway improvement works (including any works and the proposed diversion to the existing public rights of way) shown on Plan No. 003622/PA/420, which shall be subject to a highway agreement between the developer(s) and the Council as Highway Authority under sections 38 and 278 of the Highway Act 1980, shall be completed in accordance with the approved details.

Reason:

In the interest of highway safety and to maintain the effective operation of the local highway network, in accordance with UDP Policy ENV 27 (Design of New Developments).

23. Details of the improvements to the B4265/St Athan Crossroads junction with right turning facility and pedestrian phasing, including full engineering drawings, shall be submitted and approved in writing by the Local Planning Authority and shall thereafter be completed in accordance with the approved details prior to the peak in the number construction vehicles (which is defined as more than 200 deliveries a day) accessing the combined development site (relating to the ABP and DTC sites) which shall be subject to a highway agreement between the developer(s) and the Council as Highway Authority under sections 38 and 278 of the Highway Act 1980.

Reason:

In the interest of highway safety and to maintain the effective operation of the local highway network, in accordance with UDP Policy ENV 27 (Design of New Developments).

24. Full details of the planned improvements to the B4265 / Llanmaes Road junction shall be submitted to and approved in writing by the local planning authority (and be subject to a highway agreement between the developer(s) and the Council as Highway Authority under section 278 of the Highway Act 1980), and such approved improvement works shall be completed on site prior to the commencement of core training activities at the new Defence Technical College (meaning the date at which students first arrive at the College for purposes of training, but with the exception of those at the existing 4 School of Technical Training).

Reason:

To provide adequate means of access to the site and in the interest of highway safety, in accordance with UDP Policy ENV 27 (Design of New Developments).

25. Prior to the commencement of construction of the DTC, leisure facilities or SFA, full details of the facilities, services or works proposed to provide access to the development for pedestrians, cyclists and public transport shall be submitted for the written approval of the Local Planning Authority. These details shall include the phasing for implementation of new or improved cycleways, footways and other improvements to sustainable transport facilities serving the site. These works shall thereafter be carried out in accordance with the approved details prior to the commencement of core training activities at the new Defence Technical College (meaning the date at which students first arrive at the College for purposes of training, but with the exception of those at the existing 4 School of Technical Training).

Reason:

To provide adequate means of access to the site by sustainable transport modes, in accordance with UDP Policy ENV 27 (Design of New Developments).

26. A scheme for the permanent signing and direction of traffic to the development shall be submitted and approved in writing by the Local Planning Authority and shall thereafter be implemented in accordance with the approved details prior to the commencement of core training activities at the new Defence Technical College (meaning the date at which students first arrive at the College for purposes of training, but with the exception of those at the existing 4 School of Technical Training).

Reason:

To provide future users with appropriate directional signage for access to the site and in the interest of highway safety, and in accordance with UDP Policy ENV 27 (Design of New Developments).

27. From the date of first commencement of core training activities at the new Defence Technical College (meaning the date at which students first arrive at the College for purposes of training, but with the exception of those at the existing 4 School of Technical Training), the white fleet bus service shall be used during peak times to transport uniformed personnel between Llantwit Major Train Station and the main DTC gate and to transport DTC personnel to Barry / Cardiff / Bridgend Railway Stations during Friday and Sunday peak times in accordance with section 16 of the Transport Assessment, such use being for the operational lifetime of the development, unless otherwise agreed in writing by the Local Planning Authority.

Reason:

To meet additional demand for public transport from service personnel and to ensure the development is accessible by sustainable modes of transport in accordance with UDP Policy ENV 27.

28. The proposals contained in the DTC Travel Plan shall be implemented in accordance with the submitted details. An annual monitoring report shall be submitted to the Local Planning Authority 12 months after the commencement of core training activities at the new Defence Technical College (meaning the date at which students first arrive at the College for purposes of training, but with the exception of those at the existing 4 School of Technical Training), and every year for 10 years thereafter, which shall include targets, success criteria and results of the Travel Plan implementation. If in the first 10 years following beneficial occupation, the Travel Plan fails to meet its targets, the developer shall review the Travel Plan within 12 months of the submission of the monitoring report identifying the failure and submit an amended plan for the written approval of the Local Planning Authority, which shall thereafter be implemented in accordance with the approved details.

Reason:

To promote sustainable travel options to the future occupiers of the site, to reduce the traffic impact on the local highways and to enable the Local Planning Authority to assess the impact of the Travel Plan on the development.

29. The vehicular access from the Castleton External Field Training Area onto Castleton Road shall not be used other than for emergency purposes.

Reason:

In the interest of local residential amenity, and to ensure compliance with Policy ENV 27 of the Adopted Unitary Development Plan.

30. Any hotel development proposed via details required in connection with condition 2 above shall ensure that parking is provided in accordance with the maximum standards as laid out in the approved South Wales Parking Guidelines Revised Edition 1993 with 2001 Addendum unless otherwise agreed in writing with the Local Planning Authority.

Reason:

To ensure that excessive parking provision is not provided in the interests of sustainability and to ensure that such parking remains wholly ancillary to the approved hotel use, and to ensure compliance with the terms of Policy ENV27 of the Unitary Development Plan.

Visual Impact

31. The first submission of Reserved Matters relating to a building associated with the development hereby approved shall be accompanied by full details of a co-ordinated strategy (such as an updated and focussed Design and Access Statement) relating to the architectural treatment of all new buildings and external hard surfaces within the development (including details and samples, where appropriate, of a co-ordinated palette of materials), for the approval of the local planning authority. Submissions thereafter shall be in general accordance with the agreed strategy/statement.

Reason:

To ensure that the overall development of the Defence Technical College is part of a coherent design strategy and to ensure the reserved matters submissions for the development are treated in a consistent manner, in the interests of good design and local visual amenities, and as required by Policy ENV 27 of the adopted Unitary Development Plan.

32. Notwithstanding the submissions, further details of a lighting strategy relating to all parts of the site (excluding the NAR) and buildings hereby approved (also having regard to the need to address the ecological requirements of condition *), shall be submitted to and approved in writing by the local planning authority. The site and buildings shall thereafter only be illuminated in accordance with the agreed strategy unless otherwise approved in writing by the local planning authority.

Reason:

In the interests of local visual and residential amenity, and to accord with the objectives of Policy ENV 27 of the Adopted Unitary Development Plan.

33. The details required in connection with condition 2 above shall include full details of the enclosure of the site / buildings, including locations and form of all existing, new and relocated fencing at the site.

Reason:

In the interests of local visual and residential amenity, and to accord with the objectives of Policy ENV 27 of the Adopted Unitary Development Plan.

34. Any landscaping scheme to be submitted as part of subsequent reserved matters applications shall provide specific detail of all existing hedgerows, trees and planting to be retained, along with the measures for their protection during the course of the development. This shall include the retention of all Important Hedgerows (under the Hedgerow regulations 1997) identified as 'to be retained' within the SFA Design and Access Statement.

Reason:

To safeguard local visual amenities, and to ensure compliance with Policies ENV 11- Protection of Landscape Features and ENV27- Design of New Developments of the Vale of Glamorgan Adopted Unitary Development Plan 1996-2011.

35. All planting, seeding or turfing comprised in the approved details of landscaping shall be carried out in the first planting and seeding seasons following the occupation of the buildings or the completion of the development, whichever is the sooner; and any trees or plants which within a period of five years from the completion of the development die, are removed or become seriously damaged or diseased shall be replaced in the next planting season with others of similar size and species, unless the Local Planning Authority gives written consent to any variation.

Reason:

To ensure satisfactory maintenance of the landscaped area to ensure compliance with Policies ENV11 and ENV27 of the Unitary Development Plan.

Environmental Impacts

36. The development shall be undertaken in accordance with the measures contained within the submitted Construction Method Statement (CMS) or amendments to the CMS which shall first have been submitted to and approved in writing by the local planning authority.

Reason:

To ensure that the potential construction impacts of redevelopment on the environment are controlled and minimised, and to accord with Policies ENV 27 and ENV 29 of the adopted Unitary Development Plan.

37. Prior to the use of the Northern Access Road for construction traffic, full details of the timetable for implementation of the bunding, acoustic screens and landscaping of the Northern Access Road, shall be submitted to and approved in writing by the local planning authority, and the required acoustic and landscaping measures shall thereafter be undertaken in full accordance with the approved phasing plan.

Reason:

To ensure that the impact of activities and traffic from the Northern Access Road on residential properties is mitigated at the appropriate time in construction, and to accord with Policy ENV 27 and ENV 29 of the Adopted Unitary Development Plan.

38. Prior to any construction works commencing on the development hereby approved, a Construction Environmental Management Plan (CEMP) shall have been submitted to and approved in writing by the local planning authority. Such plans shall include methods for the control of: -

- Hours of construction;
- noise and its mitigation (also where appropriate reference to BS5228), including locations, frequency and methodology of routine noise monitoring which would be required to be undertaken by the developer throughout the construction period;
- vibration and its mitigation
- specific requirements for the mitigation of any piling operations
- dust control and list of permitted mobile crushers and screens
- agreed hours for the undertaking of 'noisy' works (the definition of such works to be agreed through the CEMP)
- Illumination / lighting of development sites during winter months

The CEMP shall be reviewed on an annual basis (commencing with the date on which the CEMP is formally approved or other such date as may otherwise be agreed in writing by the local planning authority) and a report provided to the local planning authority within one month of the review date, detailing the results of agreed monitoring of construction activities and their impacts, and including recommendations for any amendments to the approved CEMP to reflect changing circumstances arising from the development.

Reason:

To ensure that the potential construction impacts of redevelopment on the environment are controlled and minimised, and to accord with Policies ENV 27 and ENV 29 of the adopted Unitary Development Plan.

39. Prior to the commencement of core training activities at the new Defence Technical College (meaning the date at which students first arrive at the College for purposes of training, but with the exception of those at the existing 4 School of Technical Training), an Environmental Management Plan (EMP), relating to the operational phase of the development (and covering those matters detailed in section 3.2.3 and table 16.61 of the Environmental Statement accompanying this application, together with other such matters that may be required by the local planning authority), shall be submitted to the local planning authority for approval. The Defence Technical College shall not commence training activities (with the exception of 4 School) until such time as the EMP has been approved in writing by the local planning authority, and thereafter the operation of the development shall be undertaken in accordance with such approved EMP unless otherwise approved in writing by the local planning authority.

Reason:

To ensure that the operational phase of the development does not have any unacceptable environmental impacts, and to accord with Policies ENV 27 and ENV 29 of the adopted Unitary Development Plan.

40. The Environmental Management Plan (EMP) required by condition 39 above shall incorporate full details of the hours of use of the Picketston Field Training Area (FTA), PAAB and Assault Course, including the position, heights and acoustic properties of the required acoustic bunds/screens, and agreed monitoring points and noise limits. The use of the Picketston Field Training Area, PAAB and / or Assault Course shall only commence once the necessary mitigation measures have been provided on site, in accordance with the approved details, and the FTA activities shall thereafter only be undertaken in full accordance with the agreed restrictions, with the agreed noise mitigation measures retained on site in their approved form in perpetuity unless otherwise agreed in writing by the local planning authority.

Reason:

In the interest of local residential amenity, and to ensure compliance with Policies ENV 27 and ENV 29 of the Adopted Unitary Development Plan.

41. Prior to the commencement of core training activities at the new Defence Technical College (meaning the date at which students first arrive at the College for purposes of training, but with the exception of those at the existing 4 School of Technical Training), an Operational Noise Plan (covering, and in general accordance with the details within table 16.61 within the Environmental Statement), shall be submitted to and approved in writing by the local planning authority, and the operation of the DTC shall thereafter be undertaken in accordance with the agreed plan unless otherwise agreed in writing by the local planning authority.

Reason:

To ensure that the operational phase of the development does not have any unacceptable environmental impacts, and to accord with Policies ENV 27 and ENV 29 of the adopted Unitary Development Plan.

42. The firing range at Picketston shall not be used outside of the hours of 08:30 and 17:30, unless otherwise approved in advance in consultation with the local planning authority.

Reason:

In the interest of local residential amenity, and to ensure compliance with Policies ENV 27 and ENV 29 of the Adopted Unitary Development Plan.

43. The Castleton External Field Training Area shall not be used for firing of weapons, or for the use of thunder flashes (or similar noise generating operations), and shall only be used for low level field training activities (such as camping, crawling, running, hiding, driving) as identified in the submitted documentation.

Reason:

In the interest of local residential amenity, and to ensure compliance with Policies ENV 27 and ENV 29 of the Adopted Unitary Development Plan.

44. Notwithstanding the submitted details, further details of the means of providing additional noise mitigation (which may include acoustic screening) to the residential properties known as Froglands, Old Froglands, and Rose Cottage, shall be submitted to and approved in writing by the local planning authority. Such agreed screening shall be provided on site prior to the Northern Access Road being brought into beneficial use, and thereafter retained and maintained in accordance with the approved details unless otherwise agreed in writing by the local planning authority.

Reason:

In order to ensure the impacts of the Northern Access Road on properties in the immediate vicinity are minimized, and to ensure compliance with Policy ENV 27 of the Adopted Unitary Development Plan.

45. Prior to the commencement of the NAR, a detailed lighting strategy and scheme (to include timescale for implementation), relating to the means by which the Northern Access Road would be illuminated for its full length, and including detailed analysis of the impacts of lighting upon nearby sensitive residential receptors and methods of minimising glare and visual impact from such lighting, shall be submitted to and approved in writing by the local planning authority. Such lighting scheme shall thereafter be implemented in full accordance with the approved details.

Reason:

In the interests of local visual and residential amenity, and to accord with the objectives of Policy ENV 27 of the Adopted Unitary development Plan.

Economic Development

46. 6 months prior to commencement, full details of a Labour Recruitment Strategy, to include the provision of a local 'job shop' and other measures aimed at facilitating best available access for people to the opportunities for employment arising from the construction and operation of the Defence Technical College, shall have been submitted to the Local Planning Authority for approval. The Strategy, which shall include a timetable for its implementation, shall thereafter be implemented as approved.

Reason:

To ensure that the developer undertakes best endeavours to facilitate best available access for local people to the opportunities for employment arising from the construction and operation of the Defence Technical College.

Hydrology, Geology and Hydrogeology

47. Prior to the commencement of any development (excluding the NAR or other highway improvement works required as part of the development) and notwithstanding the submitted details, a scheme for the comprehensive and integrated drainage of the site showing how foul water, surface water and land drainage will be disposed of, including any off-site foul sewerage infrastructure, shall be submitted to and approved by the LPA and thereafter the development shall be carried out in accordance with the details hereby approved and shall be implemented prior to the commencement of core training activities at the new Defence Technical College (meaning the date at which students first arrive at the College for purposes of training, but with the exception of those at the existing 4 School of Technical Training).

Reason:

To protect the integrity of the public sewerage system to ensure that the Wastewater Treatment Works is capable of treating all additional foul flows, to protect the health and safety of existing residents and ensure no detriment to the environment or water quality, and to ensure compliance with the terms of Policies ENV 7 and ENV27 of the Unitary Development Plan.

48. The details required in connection with condition 47 above shall include full details of the proposed use of sustainable drainage for all parts of the development hereby approved, and the submitted details shall:
- a. Provide information about the design storm period and intensity, the method employed to delay and control the surface water discharged from the site and the measures taken to prevent pollution of the receiving groundwater and/or surface waters;
 - b. Include a timetable for its implementation; and

c. Provide a management and maintenance plan for the lifetime of the development which shall include the arrangements for adoption by any public authority or statutory undertaker and any other arrangements to secure the operation of the scheme throughout its lifetime.

Reason:

To ensure that the development is serviced by an appropriate Sustainable Urban Drainage Scheme, and to ensure compliance with the terms of Policies ENV 7 and ENV27 of the Unitary Development Plan.

49. Foul water and surface water discharges shall be drained separately from the site, with no surface water or land drainage run-off allowed to connect (either directly or indirectly) into the public sewerage system unless otherwise approved in writing by the local planning authority.

Reason:

To protect the integrity, and prevent hydraulic overloading, of the Public Sewerage System, to protect the health and safety of existing residents and ensure no detriment to the environment, and to ensure compliance with the terms of Policy ENV27 of the Unitary Development Plan.

50. prior to the commencement of development approved by this permission, a scheme for the provision and implementation of a surface water regulation system (which must be able to demonstrate the Greenfield run-off rates for the Boverton Brook and Nant-y-Stepsau are maintained post development and shall include timescales for implementation) has been submitted to and approved in writing by the Local Planning Authority. Such a scheme shall be implemented in accordance with the times scales approved unless otherwise agreed in writing by the Local Planning Authority

Reason:

To prevent the increased risk of flooding, in accordance with Policy ENV 7 of the Adopted Unitary Development Plan.

51. The development hereby permitted shall not be commenced until such time as details of a scheme to treat and remove suspended solids from surface water run-off during construction works has been submitted to, and approved in writing by, the local planning authority. The scheme shall be implemented as approved.

Reason

To prevent the pollution of controlled waters in accordance with Policy ENV 7 of the Adopted Unitary Development Plan

52. Any facilities for the storage of oils, fuels or chemicals shall be sited on impervious bases and surrounded by impervious bund walls. The volume of the bunded compound should be at least equivalent to the capacity of the tank plus 10%. If there is multiple tankage, the compound should be at least equivalent to the capacity of the largest tank, or the combined capacity of interconnected tanks, plus 10%. All filling points, vents, gauges and sight glasses must be located within the bund. The drainage system of the bund shall be sealed with no discharge to any watercourse, land or underground strata. Associated pipework should be located above ground and protected from accidental damage. All filling points and tank overflow pipe outlets should be detailed to discharge downwards into the bund.

Reason:

To prevent pollution of the water environment in accordance with Policy ENV 7 of the Adopted Unitary Development Plan.

53. Prior to the commencement of any development (excluding the NAR or other highway improvement works required as part of the development) a scheme for the necessary infrastructure to ensure a water supply to serve the development shall be, submitted and approved in writing by the local planning and shall thereafter be implemented in full prior to any beneficial occupation occurring on the development hereby approved.

Reason: To ensure an adequate supply of water can be provided to the development in accordance with ENV27 of the UDP.

54. The details required in connection with condition 2 above shall ensure that all built development lies outside of the agreed flood outlines, unless otherwise agreed in writing by the local planning authority.

Reason:

In the interests of flood prevention and in order to comply with Policy ENV 7 of the Adopted Unitary Development Plan.

55. Details of a diversion scheme (to divert part of the upper reaches of the Boverton Brook), and including details of maintenance works/ schedule, shall be submitted to and approved in writing by the local planning authority. Such diversion scheme shall be carried out in accordance with the details approved and shall be implemented prior to the commencement of core training activities at the new Defence Technical College (meaning the date at which students first arrive at the College for purposes of training, but with the exception of those at the existing 4 School of Technical Training).

Reason:

In order to protect against, and provide betterment with regards to, flood risk in the locality.

56. Any vegetation clearance should be done outside the nesting season, which is generally recognised to be from March to August inclusive, unless it can be demonstrated through submission to the Local Planning Authority of an appropriate survey that nesting birds are absent or a method statement for works is agreed in writing with the local planning authority and fully implemented

Reason:

To ensure nesting birds are not affected by the development, as required by Policy ENV 11 of the Adopted Unitary Development Plan.

Archaeology

57. No development shall take place until the applicant has secured the implementation of a written programme of archaeological work in accordance with a written scheme of investigation which shall be submitted by the applicant and approved in writing by the Local Planning Authority and the programme and scheme shall be fully implemented as defined in the approved details.

Reason:

To ensure that archaeological interest is protected and recorded and to ensure compliance with Policies ENV18 and ENV19 of the Unitary Development Plan.

58. Prior to the commencement of any development (excluding the NAR or other highway improvement works required as part of the development), an appropriate programme of historic building recording and analysis shall have been secured and implemented in accordance with a written scheme of investigation which shall first have been submitted to and approved in writing by the local planning authority.

Reason:

As the site has buildings within its boundary which are affected by the development and which are of significance such that the specified records are necessary to mitigate the impact of the proposed development and to ensure compliance with Policies ENV18 and ENV19 of the Unitary Development Plan.

Contamination

59. Prior to the commencement of development approved by this planning permission (or such other date or stage in development as may be agreed in writing with the Local Planning Authority), the following components of a scheme to deal with the risks associated with contamination of the site shall each be submitted to and approved, in writing, by the local planning authority:

1. A preliminary risk assessment which has identified:

- all previous uses
 - potential contaminants associated with those uses
 - a conceptual model of the site indicating sources, pathways and receptors
 - Potentially unacceptable risks arising from contamination at the site.
2. A site investigation scheme, based on (1) to provide information for a detailed assessment of the risk to all receptors that may be affected, including those off site.
 3. The site investigation results and the detailed risk assessment (2) and, based on these, an options appraisal and remediation strategy giving full details of the remediation measures required and how they are to be undertaken.
 4. A verification plan providing details of the data that will be collected in order to demonstrate that the works set out in (3) are complete and identifying any requirements for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action.

Any changes to these components require the express consent of the local planning authority. The scheme shall be implemented as approved.

Reason

For the protection of controlled waters, and in the interests of public safety, and to ensure compliance with Policy ENV7 of the Unitary Development Plan.

60. Prior to first beneficial occupation of any building approved by this planning permission, a verification report demonstrating completion of the works set out in the approved remediation strategy and the effectiveness of the remediation where it relates to (either collectively or, where not possible, relating to agreed phases of the development) shall be submitted to and approved, in writing, by the local planning authority. The report shall include results of sampling and monitoring carried out in accordance with the approved verification plan to demonstrate that the site remediation criteria have been met. It shall also include any plan (a "long-term monitoring and maintenance plan") for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action, as identified in the verification plan, and for the reporting of this to the local planning authority.

Reason

For the protection of controlled waters, and in the interests of public safety, and to ensure compliance with Policy ENV7 of the Unitary Development Plan.

61. Reports on monitoring, maintenance and any contingency action carried out in accordance with a long-term monitoring and maintenance plan which shall have been submitted to the local planning authority as set out in that plan. On completion of the monitoring programme a final report demonstrating that all long- term site remediation criteria have been met and documenting the decision to cease monitoring shall be submitted to and approved in writing by the local planning authority.

Reason

For the protection of controlled waters, and in the interests of public safety, and to ensure compliance with Policy ENV7 of the Unitary Development Plan.

62. If, during development, contamination not previously identified is found to be present at the site then no further development in that area (unless otherwise agreed in writing with the Local Planning Authority) shall be carried out until the developer has submitted, and obtained written approval from the Local Planning Authority for, an amendment to the remediation strategy detailing how this unsuspected contamination shall be dealt with.

Reasons

To ensure that any contamination encountered is managed appropriately so as not to cause contamination of controlled water receptors, and to ensure compliance with Policy ENV7 of the Unitary Development Plan.

Waste Management

63. The development shall be undertaken in accordance with the measures contained within the submitted Site Waste Management Plan (SWP) or amendments to the SWP which shall first have been submitted to and approved in writing by the local planning authority.

Reason:

To ensure that the handling of site waste minimises the impact of redevelopment on the environment, and to accord with Policies WAST 1 of the adopted Unitary Development Plan.

64. Notwithstanding the submitted Waste Management Strategy (WMS), an amended Strategy shall be submitted to and approved in writing by the local planning authority, which shall address additional matters including : -
- 1) Assessment of the strategy under an ecological footprint assessment, whereby the contribution of the vehicles / infrastructure are taken into account when determining the environmental impact;
 - 2) An assessment of what waste will be produced and how that waste will be dealt with in accordance with existing legislation and future waste policies; and
 - 3) full details of the phasing for provision of the key elements of such a strategy on site (which should be before opening of the DTC facility).

The facilities within the WMS shall be implemented in accordance with the agreed phasing plan, and thereafter the development shall be operated in accordance with the agreed Waste Management Strategy unless otherwise agreed in writing by the local planning authority.

Reason:

To ensure the development adheres to the Total Waste Management Approach required for a development of the magnitude, and to ensure accordance with national policy and Policy 13 and Policy WAST 1 of the adopted Unitary Development Plan.

Service Families Accommodation

65. Prior to the first beneficial occupation of any dwelling within the SFA site to which it relates, open space shall be provided to serve the SFA dwellings contained therein, in accordance with the levels and types (comprising Local Areas for Play (LAP's), Local Equipped Areas for Play (LEAP's) and informal open space), detailed for each site within the SFA Design and Access Statement, and shall be so retained for this purpose at all times thereafter, unless otherwise agreed in writing by the Local Planning Authority.

Reason:

In order to ensure the appropriate provision of open space to serve the SFA dwellings, and to ensure compliance with Policies ENV 27- Design of New Developments, REC 3- Provision of Open Space within new residential Development, and REC 6- Children's Playing Facilities, of the Vale of Glamorgan Adopted Unitary Development Plan 1996-2011, and the advice contained within Planning Policy Wales 2002 and Technical Advice Note 16- Sport, Recreation and Open Space.

66. The areas of open space provided to serve all of the SFA developments shall be managed and maintained in accordance with a programme of works that shall first be submitted to and approved in writing by the Local Planning Authority, prior to the first beneficial occupation of any dwelling within the site to which the specific programme relates. The open space shall at all times thereafter be managed in accordance with the agreed programme, unless otherwise agreed in writing by the Local Planning Authority.

Reason:

In order to ensure the satisfactory maintenance of the areas of open space serving the SFA developments, and to ensure compliance with Policies ENV 27- Design of New Developments, REC 3- Provision of Open Space within new residential Development, and REC 6- Children's Playing Facilities, of the Vale of Glamorgan Adopted Unitary Development Plan 1996-2011, and the advice contained within Planning Policy Wales 2002 and Technical Advice Note 16- Sport, Recreation and Open Space.

67. The detailed SFA development layouts submitted as part of any subsequent reserved matters applications shall have full regard to the design framework and principles contained within the SFA Design and Access Statement, and the guidance contained within the Department for Transport document 'Manual For Streets'.

Reason:

In order to ensure a high quality, sustainable form of residential development, which complies with the Council's Adopted Unitary Development Plan Policies and the Guidance contained within Planning Policy Wales 2002, the applicants Design and Access Statement and Manual For Streets.

68. The first occupation of the dwellings comprising the residential developments hereby approved in outline shall be used solely as Service Families' Accommodation, that being housing for military personnel and their families, and for no other purpose or form of residential use whatsoever, unless otherwise agreed in writing by the Local Planning Authority.

Reason:

In order to control the nature of the development hereby approved, because the dwellings are only considered acceptable in these locations to specifically serve workers associated with the Defence Technical College, and to ensure compliance with Strategic Policy 2, Policies ENV 1- Development in the Countryside and EMP 10- RAF St. Athan of the Vale of Glamorgan Adopted Unitary Development Plan 1996-2011, and the advice contained within Planning Policy Wales 2002.

69. Recycling facilities shall be provided for the occupiers of each SFA dwelling, to include green boxes for recyclables, compost bins, green bags for green waste, kitchen waste containers and kerbside caddies, prior to their first beneficial occupation.

Reason:

In order to ensure that adequate recycling facilities are readily available for all residents within the SFA accommodation, and to ensure compliance with Strategic Policy 2 and Policy ENV 27- Design of New Developments of the Vale of Glamorgan Adopted Unitary Development Plan 1996-2011.

70. Prior to the first beneficial occupation of any of the SFA dwellings within the sites at Tremains Farm and 'North of West Camp', the existing foot bridges over Boverton Brook, which provide pedestrian access between the sites and Eglwys Brewis Road, shall be upgraded or replaced in accordance with a scheme which shall first be submitted to and approved in writing by the Local Planning Authority. The new/upgraded bridges shall be retained free of obstruction for pedestrian access between the sites and Eglwys Brewis Road at all times thereafter.

Reason:

To ensure a satisfactory pedestrian linkage between the 'North of West Camp' site and Eglwys Brewis Road, and to ensure compliance with Strategic Policy 2 and Policy ENV 27- Design of New Developments, of the Vale of Glamorgan Adopted Unitary Development Plan 1996-2011.

71. Any SFA accommodation located around the NW boundary of the existing West Camp, within areas which have been identified as likely to be subject to noise Category C, as defined by the submitted TAN 11 assessment, shall be protected with mitigation measures and noise insulation that achieve a 'good to best' standard, as defined within TAN 11, prior to first beneficial occupation of any such dwelling.

Reason:

In order to protect the residential amenities of the occupiers, and to ensure compliance with Policies ENV 27- Design of New Developments and ENV 29- Protection of Environmental Quality of the Vale of Glamorgan Adopted Unitary Development Plan 1996-2011, and the guidance contained within Technical Advice Note 11- Noise.

72. Prior to the commencement of the construction of the SFA dwellings, further details of the required diversions and undergrounding of power cables running through the SFA sites shall be submitted to and approved in writing by the Local Planning Authority. This shall include plans and a full detailed schedule of the lengths of cables to be diverted and re-located underground, along with a timescale for the works, and the works shall thereafter be carried out in accordance with the approved schedule and timescales.

Reason:

In order to protect the safety and visual amenity of occupiers within the SFA developments, and to ensure compliance with Policy ENV 27- Design of New Developments, of the Vale of Glamorgan Adopted Unitary Development Plan 1996-2011

Ecology

73. All development at the site shall be undertaken in full accordance with the measures and recommendations contained within the St Athan Ecology Strategy May 2009 (Capita Symonds) and Environmental Statement, Chapter 6 Biodiversity, May 2009, (Entec UK Limited), other than where amended by any submissions required to be submitted to and approved in writing by the local planning authority as detailed below, such details to be agreed in writing by the LPA prior to development commencing: -

1) Fully detailed mitigation schemes which address commitments made in the documentation listed above, to include details of the phasing of their implementation.

2) Detailed species-specific schemes of mitigation for the three European protected species associated with the application (great crested newts, bats and dormice), consistent with the general principles outlined in the documentation listed above

3) Further details of the proposed wildlife corridor around a significant part of the site, to maintain ecological connectivity beneficial to the species on site, which shall provide for a minimum width of 10m around the site (unless otherwise agreed by the Local Planning Authority)

4) Prepare and submit a detailed habitat management plan, consistent with the needs of the protected species associated with the development, for all existing and new habitat, which should include those areas which are being set aside as mitigation and conservation areas, including St Johns Valley and the terrestrial habitat corridor, which shall cover and be implemented for a period of no less than 25 years and include proposals for on-going review of management and consequential amendments to management if these are shown to be necessary by the monitoring scheme.

5) Submissions to demonstrate how the landscaping planting relating to the development will be appropriately managed, and related to the mitigation proposals for European protected species and biodiversity in general required by this condition

6) The scheme for lighting, required under the terms of this permission, shall be consistent with the requirements of both bats and dormice, such lighting plan to include measures to monitor lux levels as part of the need to maintain dark corridors, and including consideration of the impacts during construction phase, any phasing of the development and the operational phase and include remedial action to be undertaken where problems are identified by the monitoring scheme (see below).

7) Submission of full details of the precise location and design of all road crossings (Wildlife Crossings and green bridges) for protected species, particularly dormice.

8) Submission of further details of the proposed wildlife corridors and other new plantings for protected species or habitat creation, consisting of a range of native species appropriate to the species or habitats, and including details of an appropriate aftercare programme.

9) Submission of full details of a monitoring scheme for protected species to include the animals themselves and establishment of newly planted and managed habitats, including road crossings, and which shall provide for submission of bi-annual monitoring reports to the LPA, together with a final monitoring report at the end of the monitoring period), as well as details of remedial measures which shall be implemented should the monitoring show a decline in population numbers or distribution.

10) Submission of a scheme to mitigate and compensate for the impact on reptiles and their habitat.

The ecological mitigation measures identified above shall be implemented in full accordance with an agreed implementation plan, which shall first have been submitted to and approved in writing by the local planning authority prior to development commencing.

Reason:

To ensure that the development does not adversely affect the habitats or interest of Protected Species in the locality, and to comply with Policy ENV 16 of the Adopted Unitary Development Plan.

Other Matters

74. Work shall not commence on any part of the Service Families Accommodation at the Golf Course/ Stadium site which affects the existing St Athan Golf Course, until such time as the upgraded/ replacement facilities at the St Athan Golf Club have been completed and are available for use, in accordance with details which shall first have been approved in writing by the local planning authority

Reason:

To ensure limited disruption to existing sports and recreational facilities in the locality, and to accord with Policy REC 1 of the adopted Unitary Development Plan.

75. The first submission of Reserved Matters for a building associated with the development hereby approved shall be accompanied by a public art strategy (including an implementation plan) which shall detail the public art to be provided on site and integrated within the development, which shall be specifically commissioned for the site, and such public art shall be provided in full accordance with the agreed implementation plan unless otherwise agreed in writing by the local planning authority.

Reason :

To ensure that public art is provided as integral part of the development in accordance with the Public Art Supplementary Planning Guidance.

NOTE:

- 1. Please note that a legal agreement/planning obligation has been entered into in respect of the site referred to in this planning consent. Should you require clarification of any particular aspect of the legal agreement/planning obligation please do not hesitate to contact the Local Planning Authority.**
- 2. The applicant should be aware that the Boverton Brook, Llanmaes Brook and the Nant-y- Stepsau are statutory main rivers. Any works in, under or over the river channel, including the diversion of a channel, may require a formal Flood Defence Consent under Section 109 of the Water Resources Act 1991. In addition a Flood Defence Consent under Environment Agency Wales Byelaws may also be required for works within 7 metres from the top of the natural banks or from the landward toe of any artificial embankment or structure designed to contain flood water. A Flood Defence Consent will also be required under S.23 of the Land Drainage Act 1991 for structures within the channel of any ordinary watercourse that may effect the flow within the channel.**

- 3. The maximum Greenfield run-off rate for any discharges into the Boverton Brook catchment is 3.9 litres/second/hectare, and 7.4 litres/second/ hectare for the Nant-y-Stepsau.**
- 4. The EAW advise that the emergency outfall location (Boverton Brook or Nant y Stepsau) relating to the proposed new foul sewage pumping station is yet to be agreed. They also advise that discharge (even only in an emergency) into the Boverton Brook may not be acceptable, and that they therefore expect to be re-consulted on any proposals regarding the location of the emergency overflow outfall and discharge to ensure the watercourse selected for the outfall location could achieve sufficient dilution. Irrespective of any planning permission granted, the applicant should be aware that consent to discharge will be required from the Environment Agency for the new foul pumping station / emergency overflow. More information can be found on the Environment Agency's website: <http://www.environment-agency.gov.uk/business/regulation/32038.aspx>**
- 5. Where any species listed under schedules 2 or 4 of the Conservation (Natural Habitats, &c.) Regulations 1994 is present on the site, or other identified area, in respect of which this permission is hereby granted, no works of site clearance, demolition or construction shall take place, unless a licence to disturb any such species has been granted by the Welsh Assembly Government in accordance with the aforementioned Regulations.**
- 6. Bats must not be disturbed or destroyed during felling work. A full visual inspection of the trees to be felled must be carried out prior to felling to check for the presence of bats. Advice on bats and trees may be obtained from the Countryside Council for Wales. Bats may be present in cracks, cavities, under flaps of bark, in dense Ivy and so forth. Should bats be identified, please contact either the Countryside Council for Wales on 02920 772400 or the Council's Ecology Section on 01446 704627.**
- 7. The attention of the applicant is brought to the fact that a public right of way is affected by the proposal. The grant of planning permission does not entitle one to obstruct, stop or divert a public right of way. Development, in so far as it affects a right of way, must not be commenced until the necessary legal procedures have been completed and confirmed for the diversion or extinguishment of the right of way.**
- 8. Where the work involves the creation of, or alteration to, an access to a highway the applicant must ensure that all works comply with the appropriate standards of the Council as Highway Authority. For details of the relevant standards contact the Visible Services Division, The Vale of Glamorgan Council, The Alps, Wenvoe, Nr. Cardiff. CF5 6AA. Telephone 02920 673051.**

Please note that this consent is specific to the plans and particulars approved as part of the application. Any departure from the approved plans will constitute unauthorised development and may be liable to enforcement action. You (or any subsequent developer) should advise the Council of any actual or proposed variations from the approved plans immediately so that you can be advised how to best resolve the matter.

In addition, any conditions that the Council has imposed on this consent will be listed above and should be read carefully. It is your (or any subsequent developers) responsibility to ensure that the terms of all conditions are met in full at the appropriate time (as outlined in the specific condition).

The commencement of development without firstly meeting in full the terms of any conditions that require the submission of details prior to the commencement of development will constitute unauthorised development. This will necessitate the submission of a further application to retain the unauthorised development and may render you liable to formal enforcement action.

Failure on the part of the developer to observe the requirements of any other conditions could result in the Council pursuing formal enforcement action in the form of a Breach of Condition Notice.