



PLANNING STATEMENT 2nd October, 2013
Incorporating statements on the project background, design, energy, waste, low/zero carbon, services, utilities, drainage, fire safety, and access

AMBULANCE AND FIRE SERVICES RESOURCES CENTRE (AFSRC), WREXHAM
For Welsh Ambulance Service NHS Trust (WAST)
and North Wales Fires and Rescue Service (NWFRS)

IBI Nightingale



Introduction

This Planning Statement has been prepared by Nightingale Associates on behalf of Welsh Ambulance Service Trust (WAST) and North Wales Fires and Rescue Service (NWFRS) in support of their planning application for a new Ambulance and Fire Service Resource Centre (AFSRC), at a site in Wrexham.

The purpose of the Planning Statement is to give a background for the scheme, an overview of the site, a description of the design process and to demonstrate how the proposed scheme responds to the client's brief, the site's context and the opportunities and constraints presented by both the site and its surroundings.

The project comprises an Ambulance and Fire Station of approximately 3600m² gross internal floor area, arranged over two stories. The location is on land recently purchased from the Council on the western side of Wrexham town centre, on a site bounded to the north by Wrexham Maelor Hospital (specifically the hospital car park on the former and disused railway), to the west by the proposed improvements to Croesnewydd Road, and to the south by the River Gwenfro.

The Ambulance and Fire Station is to house:

- 8 No. fire appliance vehicles
- 6 No. ambulance vehicles in an internal garage
- Up to 4 No. ambulance vehicles in an internal cleaning and re-stocking bay
- Up to 5 No. ambulance vehicles in a fleet maintenance garage

The accommodation for personnel is to include:

- Rest room, dining and kitchen facilities
- Lockers, changing rooms, showers and toilet facilities
- Training room facilities
- Support offices for operational functions
- Store rooms for equipment and supplies
- Administrative offices

Other significant features of the development of the site include:

- A hardstanding 'apron' in front of the vehicle garages
- Staff parking for 87 cars, including 2 accessible spaces for staff or visitors
- A vehicle washing and refuelling area
- A yard and compound for the ambulance vehicle maintenance operations
- Various outbuildings, including oil stores, a transformer housing, bin stores, cycle shelter
- A Fire Training Facility, to simulate wet (water), cold smoke, and blackout rescue conditions (but not live fire or hot smoke conditions)
- An area to simulate rescue from road traffic collision (RTC) situations
- External parking for operational vehicles (with vehicle charging units)

The development is intended to achieve BREEAM 'Excellent', and incorporate low/zero carbon technologies.

Background

Information regarding the strategy for establishing the AFSRC has been drawn from the 'Outline Business Case (OBC) for the Development of Operational Estate in the North East Wales Welsh Ambulance Service Trust', dated 30 April 2009, and 'The Welsh Ambulance Service NHS Trust – The Concept of Make Ready', dated 2009.

Since 2005 the Welsh Ambulance has been developing a vision to deliver the 'Highest Quality Ambulance Service for the People of Wales'. The overall strategy is centred on a policy for modernising health services which was set out in Designed for Life: Creating World Class Health & Social Care for Wales in the 21st Century.

In September 2008 the concept of Make Ready facilities were introduced by the Welsh Ambulance Service as part of its Estates Strategy. These facilities are designed to both improve the quality of service delivery and help achieve better value for money by introducing new innovative ways of working within the Ambulance Service as well as obtaining advantages from working in partnership with other emergency services.

Existing Service Model

The existing service model requires ambulance crews to prepare their own vehicles including stocking, refuelling, cleaning and disinfection. The demands placed on ambulance crews means that insufficient time is available to guarantee that appropriate infection control standards can be maintained. This is also an expensive use of trained clinical professional ambulance crew time.

New Service Model

It was decided that a new approach was required to address the following key issues;

- An estate infrastructure of the right size and in the correct locations designed around the needs of the user.
- A fleet of properly equipped ambulances and other vehicles, and highly trained staff appropriate for the delivery of the new models of care.
- Improved efficiency in the deployment of trained staff so that they are always able and equipped to respond to every emergency call.

WAST concluded that developing Ambulance 'Resource Centres' and 'Make Ready Depots' was the best way of putting the infrastructure in place to meet these requirements.

Make Ready

The 'Make Ready' concept is a quality assured vehicle preparation programme, designed to minimise cross infection and maximise patient safety, whilst eliminating the cause and effect of lost Unit Hours associated with vehicles. All of the vehicle preparation is undertaken by specially trained, non-clinical staff, allowing ambulance clinicians to focus on the delivery of high quality patient care.

The process of Make Ready can be defined as the procedure of ensuring that front line Ambulance fleet will be:

- Cleaned to attain the necessary hygiene standard including the restocking of an ambulance with optimum levels of medical equipment
- Maintained to ensure vehicle availability for each shift and ready for deployment
- Effectively managed on a day to day basis to eliminate the causes and effects of lost ambulance unit hours, arising from vehicle washing, stocking, fuelling and basic maintenance checking.

To facilitate Make Ready, depot-style centres are required, to centralise the support services provided within the Make Ready Model and to accommodate the numbers of staff and vehicles which will be assembled at a particular depot. These centres can take the form of a Make Ready Depot or an Ambulance Resource Centre, the WAST definitions of which are below:

Make Ready Depot (MRD): a bespoke building designed and built to accommodate the function of Make Ready (as described above) and including storage space for bulk medical supplies/equipment and welfare facilities for technicians undertaking the work.

Ambulance Resource Centre (ARC): a bespoke building designed and built to accommodate a number of ambulance functions comprising:

- Office and welfare facilities for staff;
- Training facilities; garaging for vehicles;
- Make Ready
- Fleet Maintenance



Existing Facilities

The current stock of Ambulance Stations in the North East Wales area (Flint, Holywell, Mold, Queensferry, Chirk and Wrexham) are in poor physical condition (Category D), defined as presenting a serious risk of imminent breakdown. The existing facilities do not readily lend themselves to supporting the MRD concept particularly in relation to enhanced standards of vehicle cleaning. The location of the current stations is far from optimal and emergency response time performance will be improved by a more strategic approach to the placement of ambulance stations.

The existing Fire Station in Bradley Road is a 1950s building and no longer meets the requirements of a modern fire & rescue station as the site is very restrictive and does not afford the accommodation for staff, vehicles and training now required in Wrexham. The building is of an age where it requires significant investment and constructing, a new building is more cost effective than upgrading the existing premises.

The possibility of relocating the station as a joint venture has been made more viable under the Welsh Government's "Making the Connections" agenda. This initiative will enable both WAST and NWFRS to realise the benefits of co-locating in Wrexham and derive savings in shared common areas in the buildings as well as forging closer working relationships.

The proposed new station will provide eight appliance bays, double the current provision, to allow for future growth during the next 50 years. There will also be shared training and meeting rooms enabling delivery of "on site learning to both WAST and NWFRS employees as well as some shared use of the facilities by the public.

A modern and flexible training facility will be provided to simulate search, ladder and fire training. There will also be a Road Traffic Collision training area, again to offer extrication practice for fire fighters and paramedics.

The location of the site, subject to the proposed enhanced new road network, will provide easier access to Wrexham and surrounding areas, due to less traffic congestion around the proposed site for the new station.



Service Delivery from Proposed New Shared Facilities

The Welsh Government established the 'Beyond Boundaries' review, as part of the action plan for implementing the 'Making the Connections' strategy for improving public service delivery in Wales.

One of the principal aims of the review, which was published in 2006, was to identify improvements in the arrangements for local service delivery which "are as radical and innovative as necessary".

The development of the Ambulance and Fire Services Resource Centre (AFSRC) will provide co-location between the Fire and Ambulance Services within the Wrexham area, which will deliver benefits in terms of shared space and scope for closer working relationships.

Such benefits include greater joint working, improved incident management, and enhanced ability to engage with the local communities, environmental benefits through the redevelopment of fewer sites and sharing the wider estate through the use of social deployment points.

Public services were identified as a key priority for the Welsh Government, and remain extant. In particular, a distinctive and ambitious vision for the way public services should be designed and delivered in and for Wales.

This radical vision of a Welsh public service is one that sees shared common goals, with people working across functional and organisational boundaries. This vision brings together the different elements of the public service in a more integrated way – to create greater dynamism, with more efficient and effective service delivery – both improving the quality and extending the scope of the emergency services for the Wrexham communities.

It will ensure that the people in Wrexham get the greatest possible value from this investment in public services with the resources going to front-line service delivery being maximised and not constrained by traditional approaches or organisational boundaries, with a high value placed on responsiveness and efficiency, over particular organisational self interest.

The emphasis is on principles and benefits of joint working. In particular:

- Joint working provides a closer relationship between the two services so skills and expertise can be applied to develop better services;
- To obtain better value for money across organisations rather than in an individual organisation;
- Benefits in aligning service objectives.

This means that it is fundamentally easier to address capacity constraints and deliver innovative and responsive services more efficiently across organisations working in partnership, rather than individual organisations constrained by their traditional boundaries working on a limited range of services.



Design Policy Context

Unitary Development Plan

National planning policy set out in Planning Policy Wales (PPW) and related Technical Advice Notes (TANs)

Technical Advice Note TAN 12: Design

Technical Advice Note TAN 15: Development and Flood Risk

Technical Advice Note TAN 22: Sustainable Buildings

Western Gateway Planning Development Brief (published by Wrexham C.B.C., March 2004)

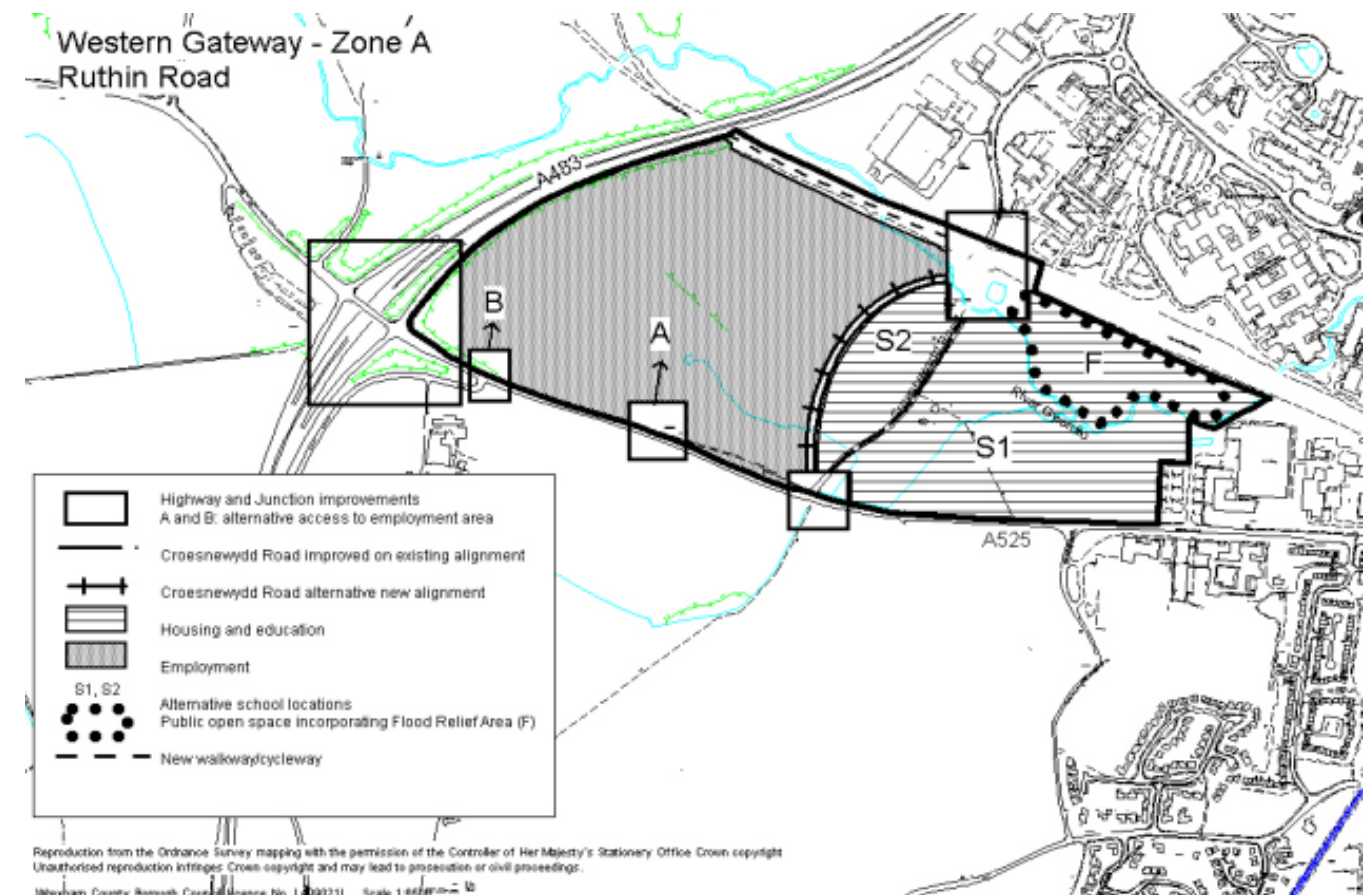
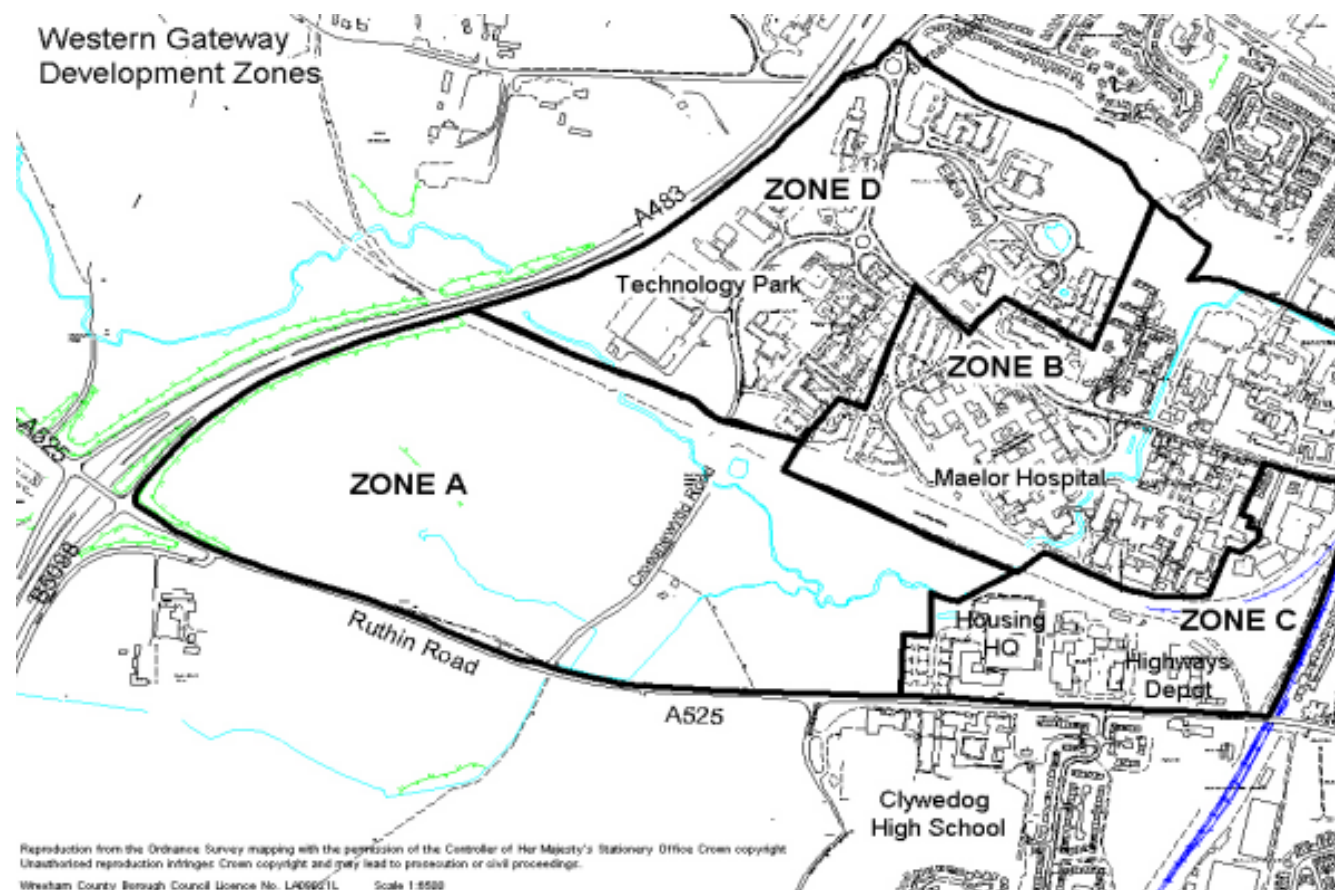
Consultation

A pre-application enquiry meeting was held on 20th March 2012 between members of Wrexham C.B.C. (Planning, Building Control and Highways Officers) and members of the client team (Welsh Ambulance Service Trust, and their appointed contractors and design consultants).

A further pre-application enquiry meeting was held on 28th October 2013 between the same parties.

A request for a screening opinion for an Environmental Impact Assessment was submitted on 30th April 2012.

It was determined on 24th May 2012 that an Environmental Impact Assessment would not be required.



The Proposed Development in context with Planning Policy

The following draws upon published local planning policy documents, particularly the Unitary Development Plan and the Western Gateway Planning Development Brief, and provides appropriate responses.

Policy Statement	Response
Wrexham County Borough is situated in north-east Wales. Bounded by the Clwydian Hills to the west and the undulating Shropshire and Powys countryside to the south, the County Borough stretches northwards and eastwards to the English border. The County Borough has a population of some 128,500 and comprises an interesting and varied pattern of settlements set in attractive, often historic, landscape. Strategically situated in a "gateway" to North Wales, the County Borough is readily accessible from the main commercial centres of the north west and midlands of England.	The development provides a modern new facility for an essential public and community service, for the town and surrounding area. It replaces existing facilities which are out dated, beyond feasible refurbishment and unable to respond to future changing needs.
Full and effective use should be made of derelict, unused, or waste land within urban areas to assist urban regeneration and reduce development pressure on the countryside. Derelict land should be restored and returned to beneficial use. The recycling and re-use of derelict, vacant, or underused land is a key principle of the Plan which has clear environmental, land use efficiency and quality of life benefits.	The development is on derelict unused urban land.
New development for housing, employment, and community services will be directed to within defined settlement limits/employment areas.	The development is considered to be a community service, and is located in an area previously identified as suitable for development.
Development must not materially detrimentally affect countryside, landscape/townscape character, open space, or the quality of the natural environment.	The development will contribute to the townscape, and is sensitive to the local environment.
Development should use previously developed brownfield land comprising vacant, derelict or underused land in preference to the use of greenfield land, wherever possible.	The development is on brownfield, vacant, derelict and unused land.
Development should maintain the existing settlement pattern and character and be integrated with the existing transport network to help reduce the overall need to travel and encourage the use of alternatives to the car.	The development will have good access to public transport and through a Travel Plan will seek to discourage use of the car and encourage the use of alternatives to the car.
The transport network will be developed by providing an integrated range of travel options to and from principal residential, commercial, employment and education centres by making the best use of the existing road and rail network, including, where necessary, the provision of facilities for both passenger and freight interchange and by the encouragement of public transport, cycling and walking.	The development will make a small but significant addition to the proposed Wrexham-Brymbo Cycleway.
Priority in waste management will be given to minimising the volume of waste generated, followed by maximising the re-use and recycling as much waste as possible. Energy recovery from waste will be favoured where re-use and recycling is not feasible, and waste will be managed at, or as near as practicable, to the location where it is initially produced.	The development will incorporate a waste management policy including the reduction of waste and the sorting of waste into separate streams for recycling and reuse, with the aim of reducing waste sent to landfill, under schemes such as BREEAM, WRAP and NWFRS Waste Management Policy.
Encouragement will be given to proposals which improve the biodiversity value of sites and to the establishment of local nature reserves where the nature conservation and landscape interest of the land will be protected and enhanced.	The development incorporates an 'ecological corridor' or riparian buffer zone of a minimum 15m width along the banks of the River Gwenfro.
All new development should:	
a) Ensure that built development in its scale, design and layout, and in its use of materials and landscaping, accords with the character of the site and makes a positive contribution to the appearance of the nearby locality.	The scale of the two-storey 3600m ² building is in keeping with surrounding development and maintains a clear presence in the community, identifiable as an emergency services facility without being unduly obtrusive. The materials and colours of the building are appropriate to the context and are intentionally subdued and neutral.
b) Take account of personal and community safety and security in the design and layout of development and public / private spaces.	The design of the development addresses these requirements by following the recommendations of the Police 'Secured by Design' Initiative.
c) Make the best use of design techniques, siting and orientation in order to conserve energy and water resources.	The building siting, orientation, and form, and the amounts and types of walls, glazing, and insulation, have been extensively analysed using virtual software modelling to ensure energy efficiency (refer to Energy Performance Certificate and BREEAM report).

d) Ensure safe and convenient pedestrian and vehicular access to and from development sites, both on site and in the nearby locality.	The building and site provide good, safe pedestrian and vehicular access (refer to Accessibility and Community Safety).
e) Ensure that built development is located where it has convenient access to public transport facilities, and is well related to pedestrian and cycle routes wherever possible.	The development will make a small but significant addition to the proposed Wrexham-Brymbo Cycleway. The pedestrian route into the site, via the partial continuation of the Wrexham-Brymbo Cycleway, safely separates pedestrians from the main traffic into the site, and where this route crosses the main access road, a marked and illuminated pedestrian crossing is provided. Access to public transport nodes will be by safe the pedestrian route on the Wrexham-Brymbo Cycleway to passing bus services on Croesnewydd Road, and train services at Wrexham Station.
f) Ensure the safety and amenity of the public and safeguard the environment from the adverse effects of pollution of water, land or air, hazards from industry and quarrying, and associated noise, odour or vibration arising from development.	A request for a screening opinion for an Environmental Impact Assessment was submitted. It was determined that an Environmental Impact Assessment would not be required. An ecological assessment has been carried out, which concludes the development will have no adverse affect on the local environment. A noise impact assessment has been carried out, which concludes the development will have no adverse affect on the local environment. Pollution control measures will include oil interceptors incorporated in surface water drainage systems, and minimising external light night-time pollution.
g) Secure public services (e.g. gas, water, electricity) to development at minimum public cost.	The development will tie into public service utility provision being upgraded as part of the Croesnewydd Road infrastructure improvements.
h) Safeguard sites and areas of nature conservation and wildlife interest, and to provide new habitats where there is an unavoidable loss of existing habitats and areas of wildlife interest.	An ecological assessment has been carried out, which concludes the development will have no adverse affect on the local environment. The development incorporates an 'ecological corridor' or riparian buffer zone of a minimum 15m width along the banks of the River Gwenfro.
i) Ensure that development does not result in, or is subject to, flooding, soil erosion, landslides or contamination, either on or off the site.	As the site has been identified as being at risk of flooding, a Flood Consequences Assessment (FCA) has been undertaken. The FCA uses hydraulic modelling to demonstrate that the new development, at a raised platform level, would not only enable the site to be developed safe from flooding but also provide a reduction in flood risk downstream (in the hospital grounds and beyond).
k) Have regard to the need to safeguard those areas that possess a strong Welsh cultural and/or linguistic identity from development that could harm this identity.	The infrastructure and operation of the building and site area will be fully bi-lingual: Welsh/English.
l) Secure the development of sustainable communities, through the promotion of the economic, social and environmental well-being of the area.	The building will have a secondary Community function (refer to Accessibility and Community Safety).
Crime prevention can be a material consideration when considering planning applications, and local authorities are under an obligation to consider the need to prevent crime in all decisions they take.	The development will be designed to the recommendations of the Police 'Secured by Design' Initiative, and 'Secured by Design' certification will be sought prior to completion.
Community benefits, related to proposed development and necessary for the grant of planning permission, can reasonably be sought providing they are fairly and reasonably related in scale and kind to the proposed development.	The development will make a small but significant addition to the proposed Wrexham-Brymbo Cycleway. The building will have a secondary Community function, with access to Reception and Training Rooms provided for the public.
Development proposals should provide for the conservation and management of hedgerows, trees, orchards, woodland, wildlife and other natural landscape and water features, and include new planting in order to enhance the character of the landscape and townscape. Development which results in the loss or significant damage to valuable trees, important hedgerows or ancient woodland sites will not be permitted.	A full arboricultural survey to BS 5837 has been carried out, with an accompanying implications and method statement. A detailed landscaping proposals plan has been provided.
Development either within or close to sites of biodiversity interest will only be permitted where it can be clearly demonstrated that the need for the development outweighs the need to safeguard the intrinsic nature conservation value of the site. Where such development is permitted, damage should be kept to a minimum, and compensatory measures should be provided. Measures to improve the biodiversity value of sites and enhance their natural conservation interest and landscape quality including the establishment of local nature reserves, will be supported.	An ecological assessment has been carried out, which concludes the development will have no adverse affect on the local environment. The development incorporates an 'ecological corridor' or riparian buffer zone of a minimum 15m width along the banks of the River Gwenfro.
Development which would adversely affect the site or setting of a Scheduled Ancient Monument or archaeological site of national significance will not be permitted.	The development is not on a site of archaeological interest.

Development (including the raising of land) within defined flood plains will only be permitted if it: a) would not be subject to an unacceptable risk of flooding on-site; and/or b) does not result in an unacceptable risk of flooding on or off-site; and/or c) does not adversely affect flood management or maintenance schemes	As the site has been identified as being at risk of flooding, a Flood Consequences Assessment (FCA) has been undertaken. The FCA uses hydraulic modelling to demonstrate that the new development, at a raised platform level, would not only enable the site to be developed safe from flooding but also provide a reduction in flood risk downstream (in the hospital grounds and beyond).
Development which would result in an unacceptable adverse impact on the water environment due to additional surface water run-off will not be permitted. Development which would have an unacceptable adverse impact upon the capacity, flow, quality or availability of controlled waters and associated land will not be permitted.	The surface water drainage from the development is proposed to be discharged to the River Gwenfro. Where appropriate, the surface water will be treated via a Class C1 by-pass separator prior to discharging to the River Gwenfro. The discharge will be restricted to the Greenfield Runoff Rates (GRR) for classified storm events. On-site attenuation will be provided for up to and including the 1 in 100 year return period storm including 20% allowance for climate change. The strategy for discharging the surface water drainage to the River Gwenfro, and the estimated GRRs have been discussed with the Environment Agency Wales (EAW). The EAW have confirmed that the strategy is acceptable in principle, and have offered no adverse comments on the estimated GRRs. A flood defence consent will be required from the EAW to allow discharge of surface water drainage to the River Gwenfro.
The existing pattern of public rights of way will be protected, maintained and improved and any potential new routes will be identified and safeguarded.	The development does not affect any existing rights of way, and contributes to the continuation of the proposed Wrexham-Brymbo Cycleway.
Proposals for new and improved public transport facilities for bus, taxi and rail services will be supported, to include public transport interchange facilities, park and ride facilities, car and cycle parking, cycle and walkway routes, and access for buses on new developments. Development proposals will be required to provide walking and cycling routes, where feasible and appropriate, that link with existing or proposed walking and cycling routes, and integrate with the public transport system.	The development contributes to the continuation of the proposed Wrexham-Brymbo Cycleway.
The Western Gateway is an area where major development is proposed in the Wrexham Unitary Development Plan and in the Wrexham Economic Development Strategy. The Council's overall aim is to: • Bring forward the development of land, focussing primarily upon sites for high quality employment and new housing, together with appropriate community facilities. • Enable the Maelor General Hospital to facilitate its modernisation and expansion programme. • Implement major highway improvement and other transportation proposals. • Promote sustainable development particularly with the following aims in mind - achieving a resource-efficient settlement pattern; minimising the demand for travel by private car; encouraging energy-efficient development; managing development to mitigate the risks imposed by climate change; contributing towards the protection and improvement of the environment; providing convenient access to employment, shopping, education, health, community, leisure and open space facilities; encouraging environmentally sound and flexible employment opportunities; contributing to the protection and where possible the improvement of people's health and well-being.	The development is an essential community service.
The Unitary Development Plan proposes to develop the disused New Broughton to Wrexham railway land as a walking, cycling and horseriding route. Provision must be made for cycle links between the main development sites and the County Borough's Cycle network, including in particular, the proposed Wrexham-Brymbo Cycleway (Policy T10).	The development contributes to the continuation of the proposed Wrexham-Brymbo Cycleway.
Croesnewydd Road is the main route through and between the prospective development zones. Improvements will be required to this route including the possible realignment of the existing carriageway and junctions and the replacement and/or strengthening of bridges over the River Gwenfro and the former railway.	The development's access road will tie into a stub junction provided
Parts of the area covered by the brief are of significant biodiversity value. These include the former railway land, the River Gwenfro and the tributary watercourses. In particular, the railway land is an important wildlife corridor which should be maintained and enhanced as a component of an emerging green network. Developments affecting areas of biodiversity interest should therefore reflect the aims and objectives of the Council's Biodiversity Action Plan.	The development incorporates an 'ecological corridor' or riparian buffer zone of a minimum 15m width along the banks of the River Gwenfro.

The site identified in Zone A of the Western Gateway is the largest Unitary Development Plan land allocation for new housing in the Wrexham Town area.	Although the site area has previously been identified for potential residential use, and outline applications have been submitted for housing development, at the pre-application enquiry meeting with Wrexham Council Planning Officers on 20th March 2012, it was indicated that the development would be a suitable and appropriate alternative use of land other than residential.
Although the land is not affected by any statutory wildlife designations, it is possible that protected species may be present. There may include great crested newts in and around the ponds; otters and water voles along the river and streams; bats in the mature trees; and badgers in the woods and along the hedgerows. Other protected species that could occur across the land may include grass snakes, lapwing, skylark and song thrush. Surveys of habitats for all the above species will therefore need to be undertaken prior finalising the layout of any development. Whether or not any protected species are present, the Council will expect proposals for development to reflect the aims and objectives of the Authority's Biodiversity Plan. In particular, the existing semi-natural habitats namely the copse, mature trees, ponds and river/stream corridors should be substantially retained and, wherever possible, enhanced in order to safeguard the existing level of biodiversity interest.	An ecological assessment has been carried out, which concludes the development will have no adverse affect on the local environment. The development incorporates an 'ecological corridor' or riparian buffer zone of a minimum 15m width along the banks of the River Gwenfro.
The cleared land to the east of Croesnewydd Road adjoining the former railway may be subject to residual ground contamination. In addition, the north west corner of the potential development land is within 250 metres of an old landfill site on the other side of the Wrexham by-pass. Prior to any development proposals being finalised, it is therefore recommended that an investigation be carried out to ascertain the presence and significance of any contamination. The investigation could initially take the form of a desk study followed, if appropriate, by on-site works including soil sampling and chemical analysis. The results of the investigation would determine the extent of any remediation works that might be necessary.	A site investigation of ground conditions has been undertaken to establish contamination levels and inform building design.
Low lying land in the vicinity of the Ruthin Road/Croesnewydd Road junction has been affected by occasional flooding from the nearby watercourse. Further investigation will therefore be required into whether or not any form of built development on this land would be practicable. If a balancing pond needs to be established in order to safeguard drainage , the design of the pond should complement the landscape scheme for the Ruthin Road frontage referred to in paragraph A.4.3 above. In addition, an assessment will needed, in consultation with Environment Agency Wales, into the potential implications for surface water run-off on developing the area north of Ruthin Road as a whole. Consideration should be given to adopting a Sustainable Urban Drainage System approach in the design of new development.	Refer to response regarding the FCA and surface water drainage above.
In recent years, the River Gwenfro, which flows across the northern part of the zone, has caused flooding downstream in the Town Centre. In order to minimise the risk of this problem reoccurring, a flood retention area will need to be safeguarded along the course of the river within the layout of new development in zone A. The capacity of the flood retention area will be specified in consultation with the Environment Agency Wales but is likely to be in the order of 50,000 cubic metres. The flood retention area may form part of the overall open space provision referred to in paragraph A.4.1above. Subject to further detailed assessment, the flood retention area is likely to be located towards the north-eastern corner of zone A where the river Gwenfro enters a culvert beneath the former railway line.	Refer to response regarding the FCA and surface water drainage above.

The Site

The site is a plot of land within an area that has been previously identified for development opportunities under proposals known as the 'Western Gateway Development'.

The total site area is 3.17 hectares. The total developable site area is 2.25 hectares (i.e. excluding a 15m wide 'ecological corridor' along the banks of the River Gwenfro).

The site is accessed from Croesnewydd Road. As part of the Western Gateway Development infrastructure improvements, Croesnewydd Road has been improved, removing a narrow and weak bridge (with weight restrictions) over a former railway line, and to provide stub access junctions for further road development around the Western Gateway Development site. The site is to be accessed from one of these junctions.

Once within the site boundary, an access and egress road is also being provided to the Wrexham Maelor Hospital car park.

A new footpath and cycle path is to be formed, as a partial continuation of the proposed Wrexham-Brymbo Cycleway (Unitary Development Plan Policy T10), which may require creation of a right of way.

Formation of the access and egress road to the Wrexham Maelor Hospital car park, and formation of a part of the continuation of the footpath and cycle path implies works to land outside the site and planning application boundary (i.e. within the grounds of the Wrexham Maelor Hospital car park). These works are to be included within this contract and planning application, and although limited in nature, they are on land not owned by the applicant, therefore a 'Certificate B' notice is being provided. Wrexham Maelor Hospital are aware of this, and support this approach.

As the site has been identified as being at risk of flooding, a Flood Consequences Assessment (FCA) has been undertaken. The FCA investigates raising the platform of the main part of the site (accommodating all the main facilities on the site) to mitigate risk from a 1000-year flood event, with allowance for climate change, and an additional 300mm freeboard. The FCA uses hydraulic modelling to demonstrate that the new development would enable the site to be developed safe from acceptable risks of flooding, and also meet requirements relating to off-site implications by having no significant adverse impact.

A site investigation of ground conditions has been undertaken to establish contamination levels and inform building design.

Due to the potential presence of protected and notable species around the site, an ecological assessment has been undertaken, and the impact of the development is to be mitigated by preservation of 15m wide 'ecological corridor' along the river bank.

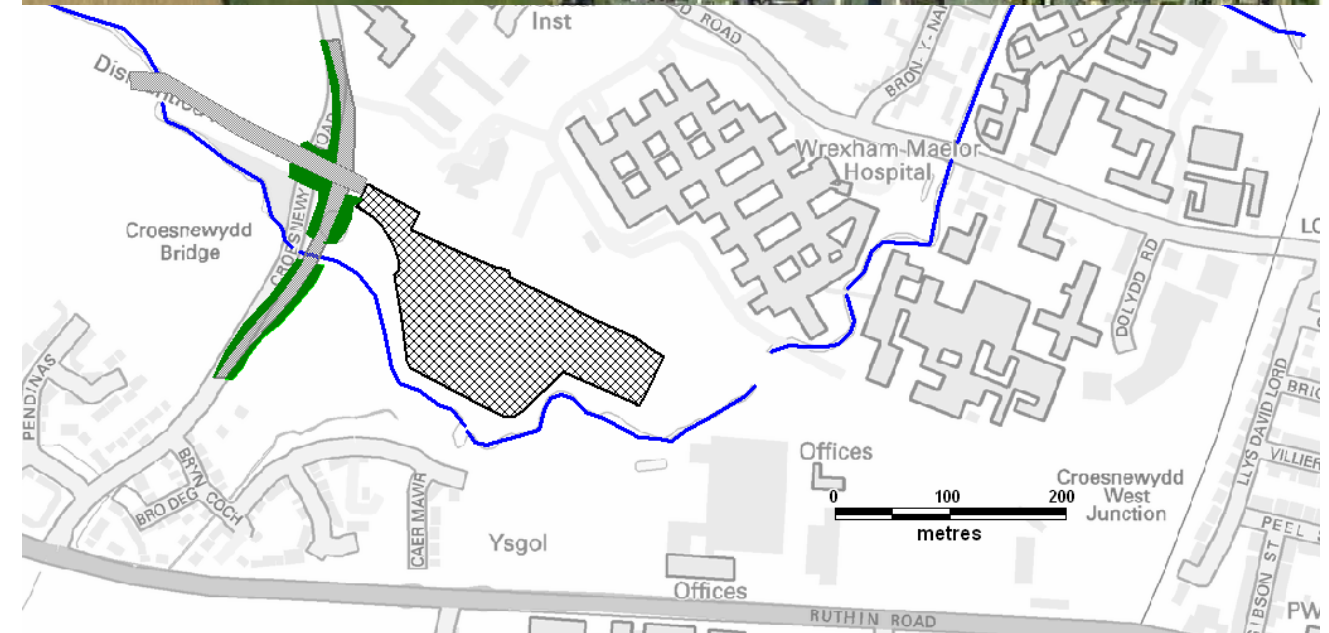
The presence of invasive plant species (Himalayan Balsam) was confirmed by a survey report. The report recommended treatment measures, which have been undertaken.

A Radon survey report indicates the presence of Radon, for which full Radon protective measures will be included.

A noise impact assessment to BS 4142 has been carried out.

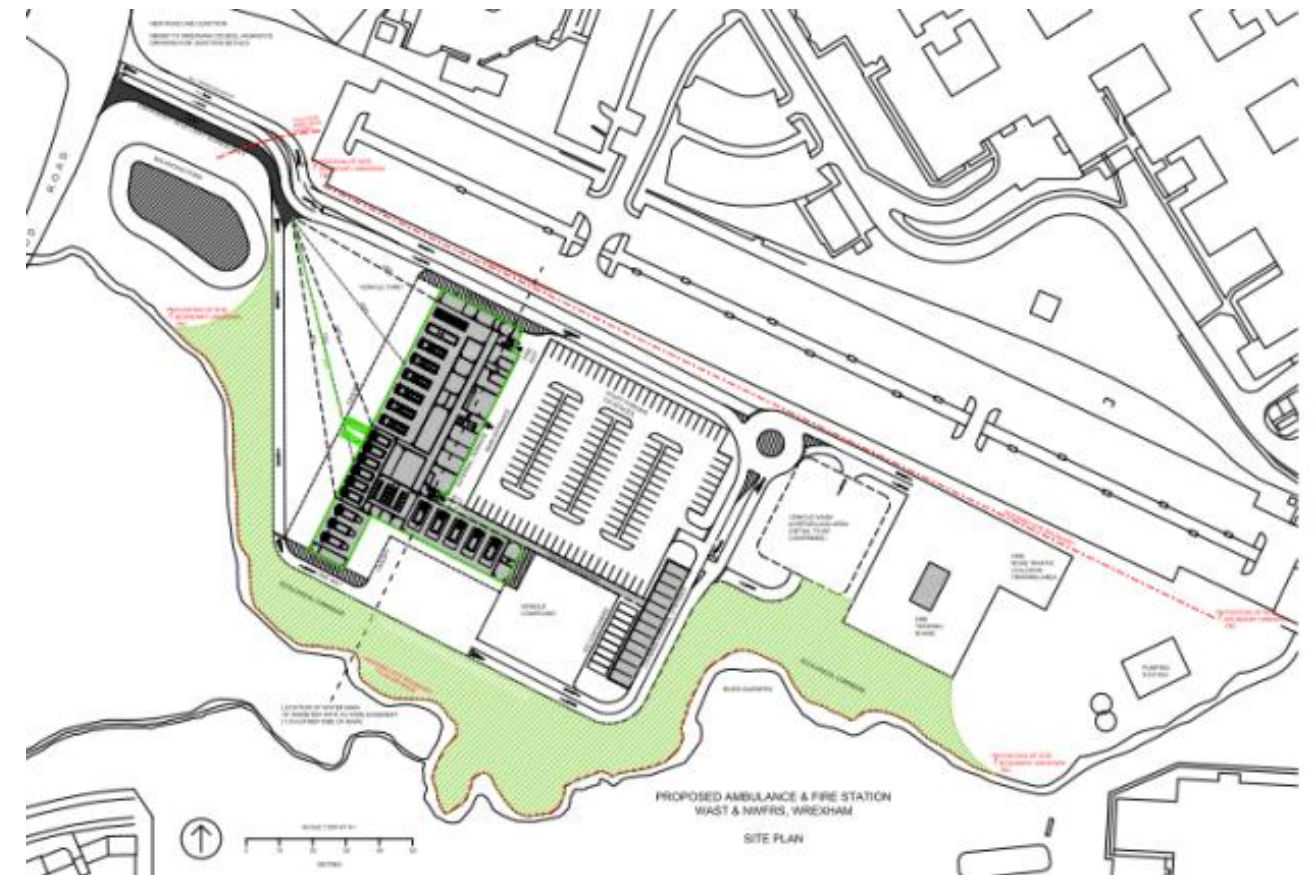
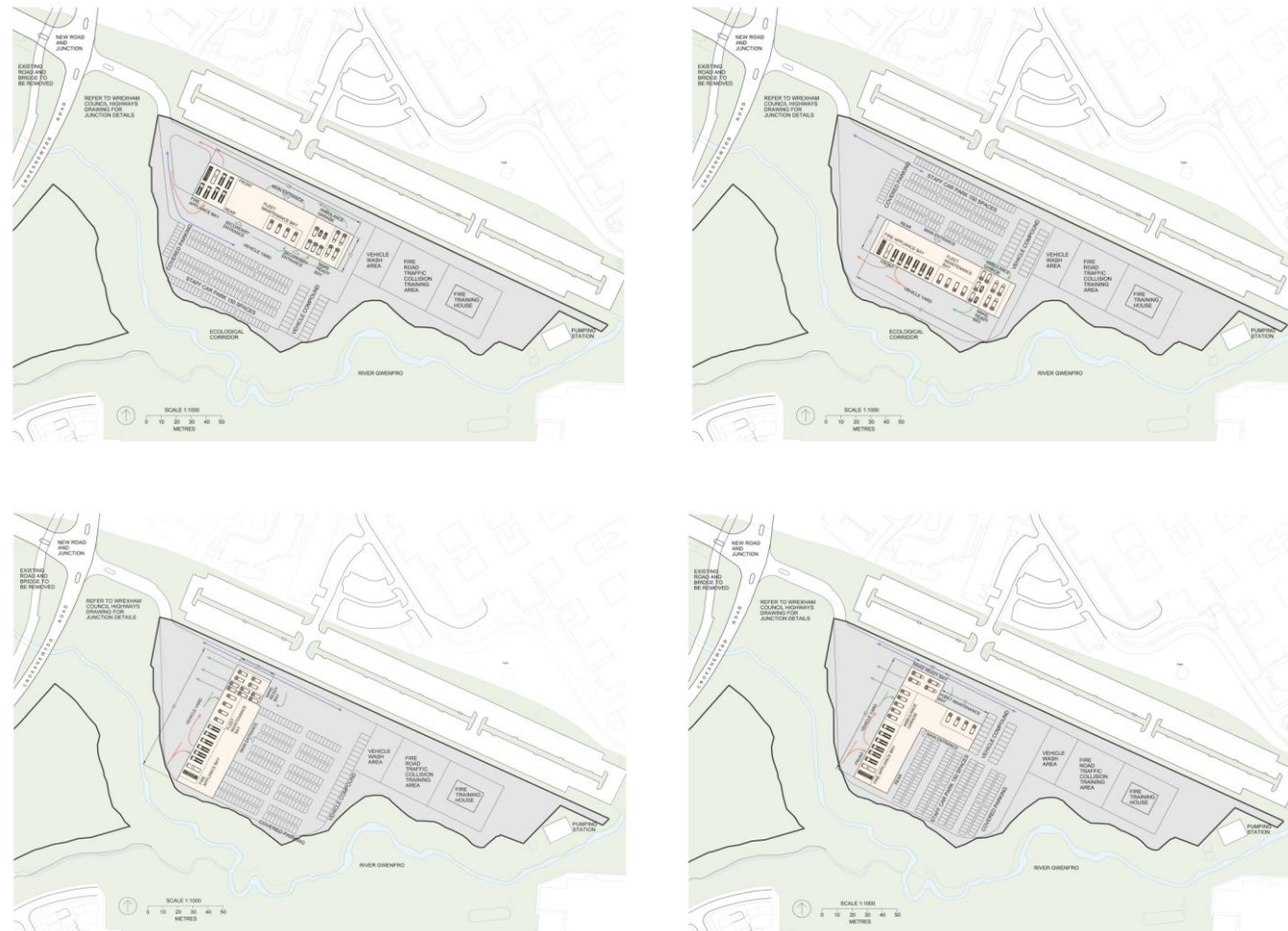
An arboricultural survey to BS 5837 has been carried out, with accompanying implication and method statements, and a tree protection plan.

A traffic assessment in the form of a comparison report against previous planning application submissions has been undertaken.

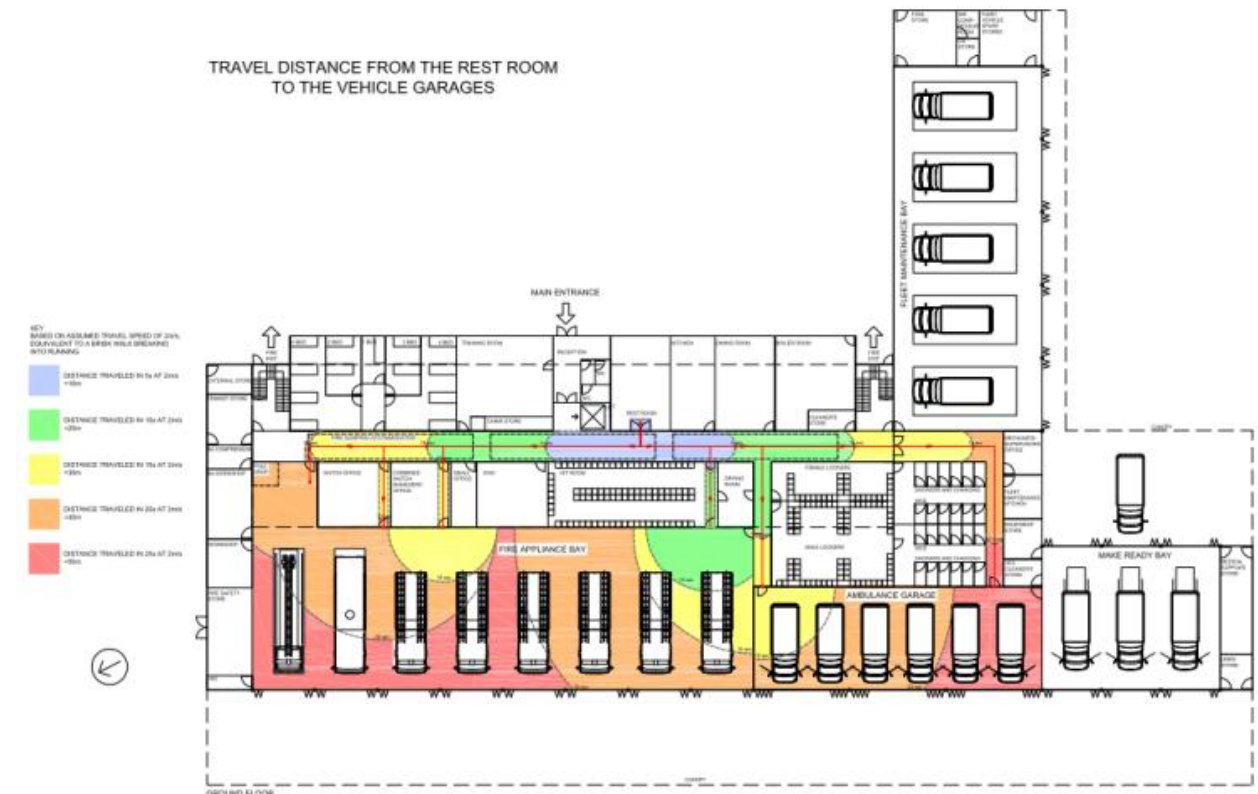


Design Development

The layout of the site, and the internal accommodation of the building, has been determined by operational requirements established during the development of the brief. During the early design stages of the project a number of configurations of the building and the site were tested against set criteria, with a simple pass or fail result. Early design development drawings reproduced here reflect the evolution of the design to suit the required functions of the services.



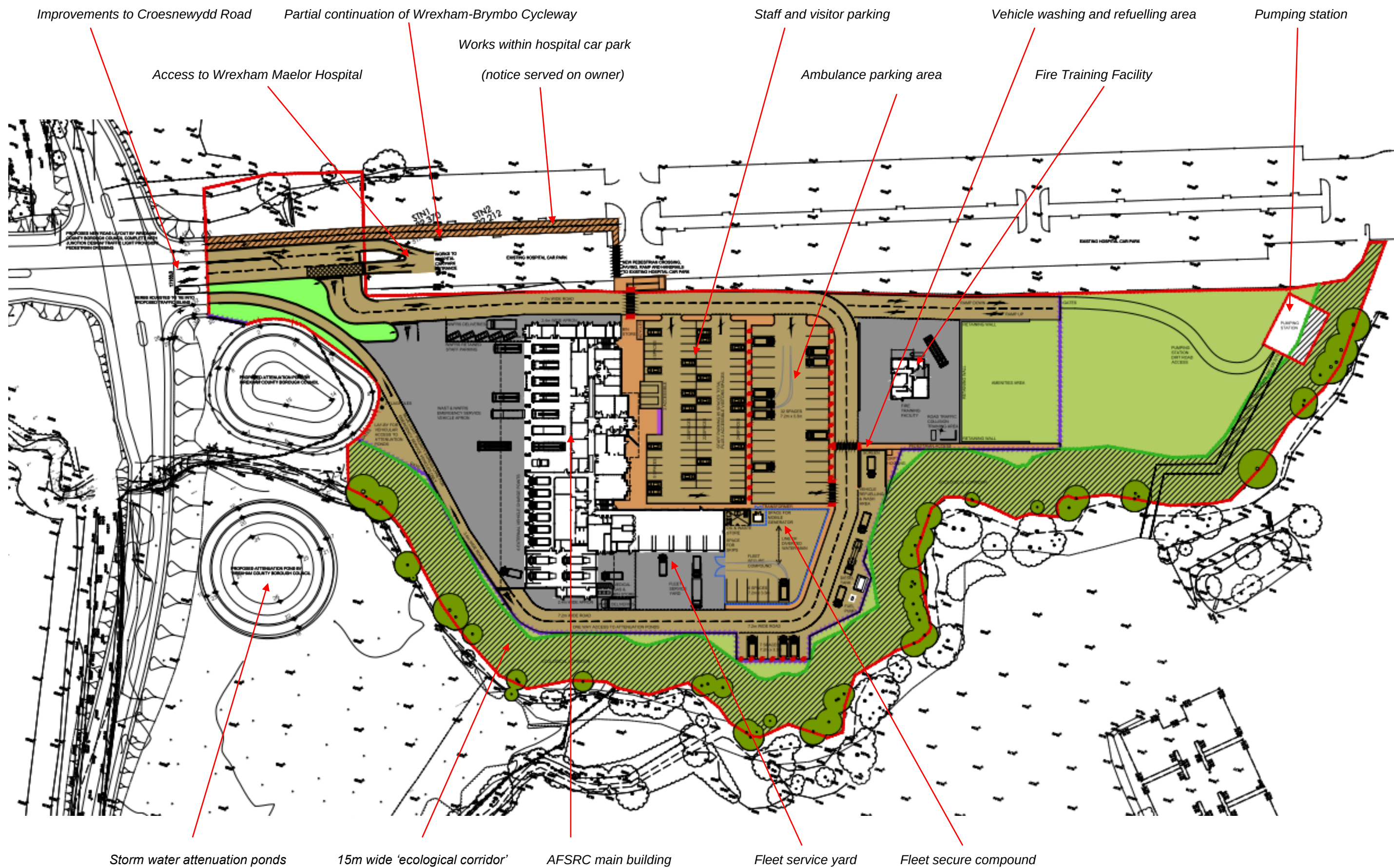
TRAVEL DISTANCE FROM THE REST ROOM
TO THE VEHICLE GARAGES



A primary function of the building, to house emergency service vehicles, and a primary requirement, for the vehicles to egress from the site under 'blue light' emergency response conditions within minimum times, determined that the vehicle garages should be arranged in a line facing west towards Croesnewydd Road. This results in a front elevation which is predominantly vehicle garaging, but this is appropriate to the building type, and clearly states the building's function.

The location of the building's main entrance (for staff and visitors) on the opposite elevation, facilitates separation the operational side of the building from car parking and pedestrian access, for safety and operational efficiency.

Various exercises were undertaken to analyse the traffic flow around the building, and to establish travel distances and response times, both for personnel movement within the building, and vehicle movement when egressing the site.



Materials

Facing Brickwork
Smooth red brick

Base brick (below dpc)
Smooth engineering brick (blue/grey)

Cladding
Kingspan KS1000 composite insulated
metal panels (cream RAL 9015)

Roof
Kingspan KS1000 composite insulated metal panels
(merlin grey RAL 180 40 05)

Flashings, gutters and rainwater downpipes
Colour coated metal (dark grey RAL 7016)

Canopy
Galvanized steel and translucent polycarbonate

Windows
Aluminium framed double glazed windows
(dark metallic silver grey RAL 9023)

Doors
Aluminium framed double glazed doors
or steel doors
(dark metallic silver grey RAL 9023)



Visualisations



Energy

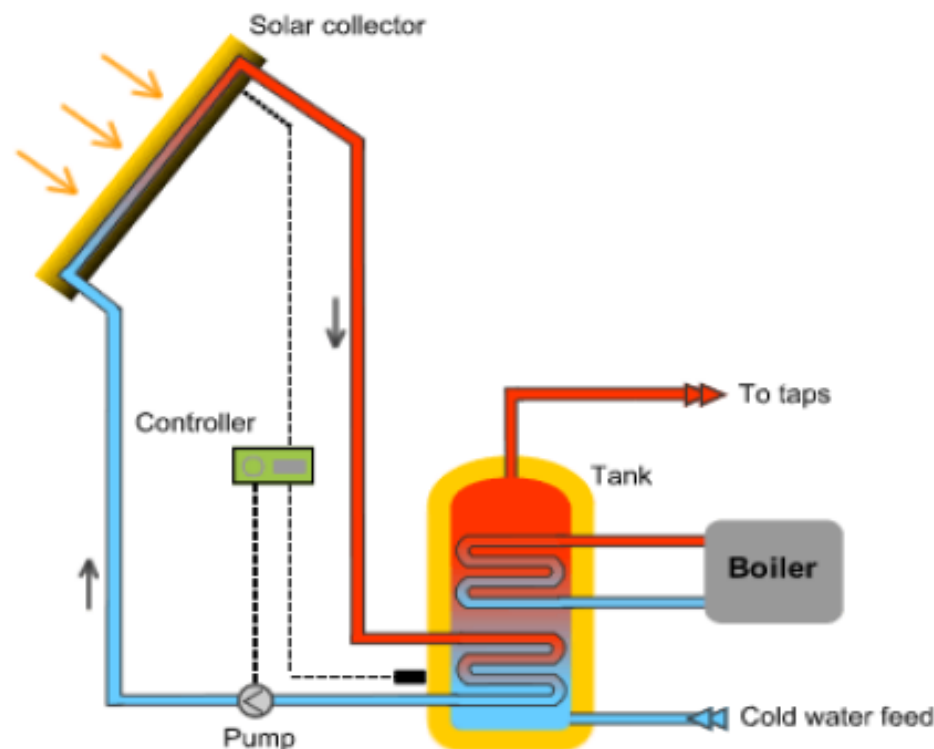
It is expected that the development will be designed to reflect the continuous demand for energy required to support the environmental services and aim to conserve and utilise energy to the maximum extent possible. In addition, the environmental services proposals will be designed where practicable using the latest techniques for 'active and passive' energy recovery and conservation.

Low/Zero Carbon (LZC)

A report has been prepared in accordance with the Ministerial Interim Planning Policy Statement (MIPPS) 01/2009 and Draft Technical Advice Note (TAN 22) on Planning for Sustainable Buildings. It is also intended to satisfy the requirements of the BREEAM assessment for a feasibility study at RIBA Stage C.

Within the report, the following LZC technologies were discussed in detail:

- Solar Hot Water
- Biomass
- Combined Heat and Power (CHP)
- Photovoltaic
- Wind
- Water Cooling (lake)
- Ground Source Heat Pump
- Air Source Heat Pump
- Rainwater Harvesting and Grey Water Use
- Building Loads



Example of a typical solar hot water system

The proposed development will consist of the AFSRC building which will house the make ready bays and associated store rooms, locker rooms, kitchen, rest room, office areas and plant room. The majority of the energy loads will be for standard room types, which has been taken into account during initial modelling results that have been used in this report.

The building loads used in this report are based on:

- Energy Consumption Guide 81 – Industrial
- BISRIA Rule of Thumb
- WAST ARC IES thermal model results
- Building loads for the ARC have been estimated as:
- Heating annual consumptions: 157 kWh/m²/year
- Base load annual consumptions: 39 kWh/m²/year
- Electricity annual consumptions: 153 kWh/m²/year
- Electrical peak demand: 40VA/m²
- Proposed Services
- General Lighting

Lighting installations will be designed with reference to, CIBSE guidance documents and to meet the specific requirements of the Authorities Requirements. Installations will be designed to 'maintained illuminance' levels as defined by the Authorities Requirements, where given, or to CIBSE guidance otherwise, taking account of the depreciation of lamp light output, luminaire and room surface degradation.

External Lighting

All external lighting will be provided in accordance with the advice given in the Institution of Lighting Professionals (ILP), Guidance Notes for the Reduction of Obtrusive Light. The lighting of the forecourt and car park shall be provided with an amenity lighting scheme, rather than standard lighting columns.

Natural Light

The use of natural light is used where possible. Location, size and type of windows have been discussed with the architect, together with the use of roof lights.

Gas Boilers

Gas boilers will be condensing, Low NOx, gas fired automatic low/high fire type complete with boiler flue connection.

Natural Ventilation

To limit the power required for cooling or ventilation, natural ventilation is generally the preferred solution unless there are internal spaces or operational reasons which call for the installation of mechanical ventilation or air-conditioning systems both of which are expensive in terms of capital and running costs.

Where appropriate the use of natural ventilation has been maximised and supplemented only where necessary by the introduction of mechanical ventilation. Natural ventilation is generally provided by single sided and stack assisted cross ventilation via openable windows and trickle vents. However, due to a high level of vehicular activity at all of the sites, the provision of natural ventilation may be limited depending on air quality and noise levels.

Foul Drainage

The foul sewage from the development is proposed to be discharged to the existing public sewer located along the northern boundary of the site. Dwr Cymru Welsh Water (DCWW) have confirmed that this sewer has capacity to accommodate foul sewage from the proposed development. The point of connection to this sewer is subject to detailed design and agreement with DCWW.

An application under Section 106 of the Water Industry Act 1991 will be required to obtain consent from DCWW for connecting to the public sewer.

The proposed development will consist of two vehicle wash down facilities. The wash down facility servicing the fire appliances will be located along the front apron in the western part of the site, and the wash down facility servicing the ambulances will be located within the eastern part of the site, adjacent to the refuelling facility. Although these systems are proposed to be fully self contained recirculating systems, a connection to the foul drainage network will be required to accommodate any overflow from these systems. The overflow discharge will be classified as trade effluent, and will therefore require a Trade Effluent Discharge Consent

Surface Water Drainage

The surface water drainage from the development is proposed to be discharged to the River Gwenfro. Where appropriate, the surface water will be treated via a Class C1 by-pass separator prior to discharging to the River Gwenfro. The discharge will be restricted to the Greenfield Runoff Rates (GRR) corresponding to the following storm events.

- 1 in 1 year return period
- 1 in 30 year return period; and
- 1 in 100 year return period.

The GRR for the above storm events have been estimated at 5 l/s/ha, 9.6 l/s/ha and 11.9 l/s/ha respectively. On-site attenuation will be provided for up to and including the 1 in 100 year return period storm including 20% allowance for climate change.

The strategy for discharging the surface water drainage to the River Gwenfro, and the estimated GRRs have been discussed with the Environment Agency Wales (EAW). The EAW have confirmed that the strategy is acceptable in principle, and have offered no adverse comments on the estimated GRRs. A flood defence consent will be required from the EAW to allow discharge of surface water drainage to the River Gwenfro

Waste Collection, Storage, and Disposal

Areas and methods to collect and store the following wastes are incorporated into the plans:

General waste will be separated, collected and stored as follows: paper and cardboard, plastics, metals, glass, compostibles, printer and toner cartridges.

Clinical waste will be collected and stored for separate specialist disposal.

Waste oil from vehicle maintenance operations will be stored in bunded tanks for separate specialist disposal.

Colour coded waste bins will be located at suitable points within the building, and several covered or enclosed areas are designated on the site for locating wheeled dumpster bins, enclosed skips and bunded tanks.

Ambulance vehicle fleet maintenance, involving the following relevant items: waste oil and grease, vehicle parts, air compressors, vehicle washing and re-fuelling. No hazardous or toxic substances.



Example of proposed separation of waste for collection and recycling in the building

Accessibility and Community Safety

The AFSRC will primarily be accessed by the emergency service personnel based at the building. Consideration has been given to facilitate access not just by car, but also by public transport, motorbike, bicycle, and on foot. Although the building has a perimeter fence for security, the main access route will be 'open', as the function of the building precludes gates over the main access route. The main vehicular route into the site separates cars driven by staff and visitors from emergency service vehicles, and the route into the car park further separates parking vehicles and pedestrians from the main traffic around the site. Within the car park, provision is made for secure motorbike and bicycle parking. The pedestrian route into the site, via the partial continuation of the Wrexham-Brymbo Cycleway, safely separates pedestrians from the main traffic into the site, and where this route crosses the main access road, a marked and illuminated pedestrian crossing is provided. Access to public transport nodes will be by safe the pedestrian route on the Wrexham-Brymbo Cycleway to passing bus services on Croesnewydd Road, and train services at Wrexham Station.

The building will also serve a community function, with the Reception and Training Rooms on the ground floor, adjacent to the main entrance, being available for community use and publicly accessible by arrangement. Access for visitors will be generally limited to these areas, although guided visits around the operational areas of the building may also be envisaged.

The layout of the site and the building will be designed in accordance with the Police 'Secured by Design' initiative. The development will incorporate many features recommended in this initiative, including: a secure perimeter fence, safe but unobtrusive external lighting to the building and car parking areas, CCTV, an open layout with no 'blind corners', secure locking to windows and doors (to the highest industry standards). The building will also be fully operational and manned 24 hours a day, 7 days a week.

The development will contribute to community safety by use of a presently derelict site which carries risks and hazards, to transform it into a facility which will benefit the town, enhancing the delivery of public emergency services to the area. Furthermore, the building will play an important role in the community, allowing access for the public to the emergency services, for educational and public information purposes. For example the Fire Service have programmes targeted at reducing fire deaths by a proactive approach to community safety, including home safety checks and the fitting of smoke detectors, as well as a preventative approach to the peril of arson, including educational visits to schools.

The design will address obligations relating to the reasonable provision of accessibility under DDA regulations, guidance within the Building Regulations Approved Documents and current best practice (particularly the recommendations of BS 8300).

All entrances to the building will be level in approach, well-lit, unobstructed, and with appropriate signage. The main public entrance will incorporate outward-opening swing doors. All finishes, signage and lighting will be designed to ensure ease of access and use. Horizontal circulation routes will be level, with a minimum clear width of 1500mm.

All doors will be suitable for wheelchair users and ambulant disabled, and a minimum clear space of 300mm will be provided facing the leading edge of all doors. The opening force at the leading edge of all doors will be less than 20N, and all door ironmongery will be suitable for those with limited manual dexterity. All doors will be fitted with anti-trap finger guards.

Colour contrast against backgrounds to assist users with impaired vision will be used on all door leading edges and frames, door handles, and handrails. Glazing to internal doors and glazed screens will permit vision for both standing and seated use, incorporating safety manifestations where required. The internal finishes, colours and textures will be influenced by the needs of the visually impaired, and lighting will allow for good colour rendering. Floor finishes will offer an appropriate level of slip resistance and surface changes will be physically defined.

WC provision will include accessible facilities for staff and visitors throughout. In staff areas, accessible WCs are provided within no more than 40m distance. An accessible WC and baby changing facility are provided for visitors accessing the Reception and Training Room areas when used for community functions.

A 13-person lift is provided to first floor.



Interior design finishes and colours for visual contrast