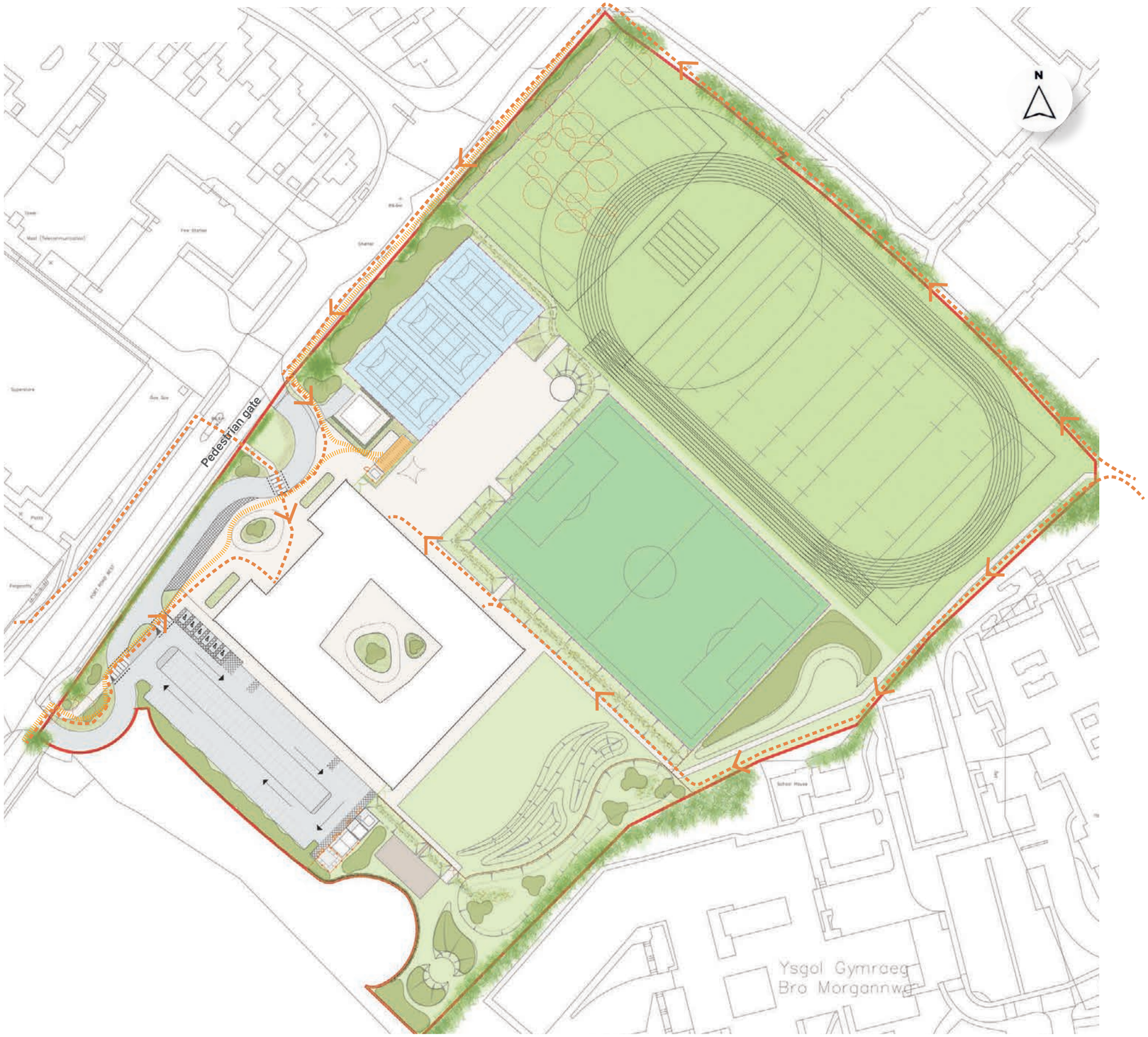
3.5.6. Pedestrians

The safety of pedestrians travelling into, out of, and around the school grounds has been paramount in defining the layout of the site. Pedestrians do not share the same routes as vehicular traffic and have discrete entrances to the school grounds. Where possible, pedestrians crossing vehicular traffic routes has been avoided. Zebra crossings are proposed for all other instances. Traffic flows are strictly controlled, please refer to '2.5.4 Vehicles.'

3.5.7. Bicycles

Cycle routes are kept out of roads and motor traffic routes. Secure cycle storage is located adjacent to the MUGA.

Pupil entrances have been designed to accommodate current pupil routes to school. As well as approaching from either end of the site from Port Road West, it is understood that some pupils arrive from the other side of the road: in the interest of pupil safety an additional pedestrian access point has been introduced to encourage pupils to use the safest crossing point.



3.5.8. Vehicles

Cars

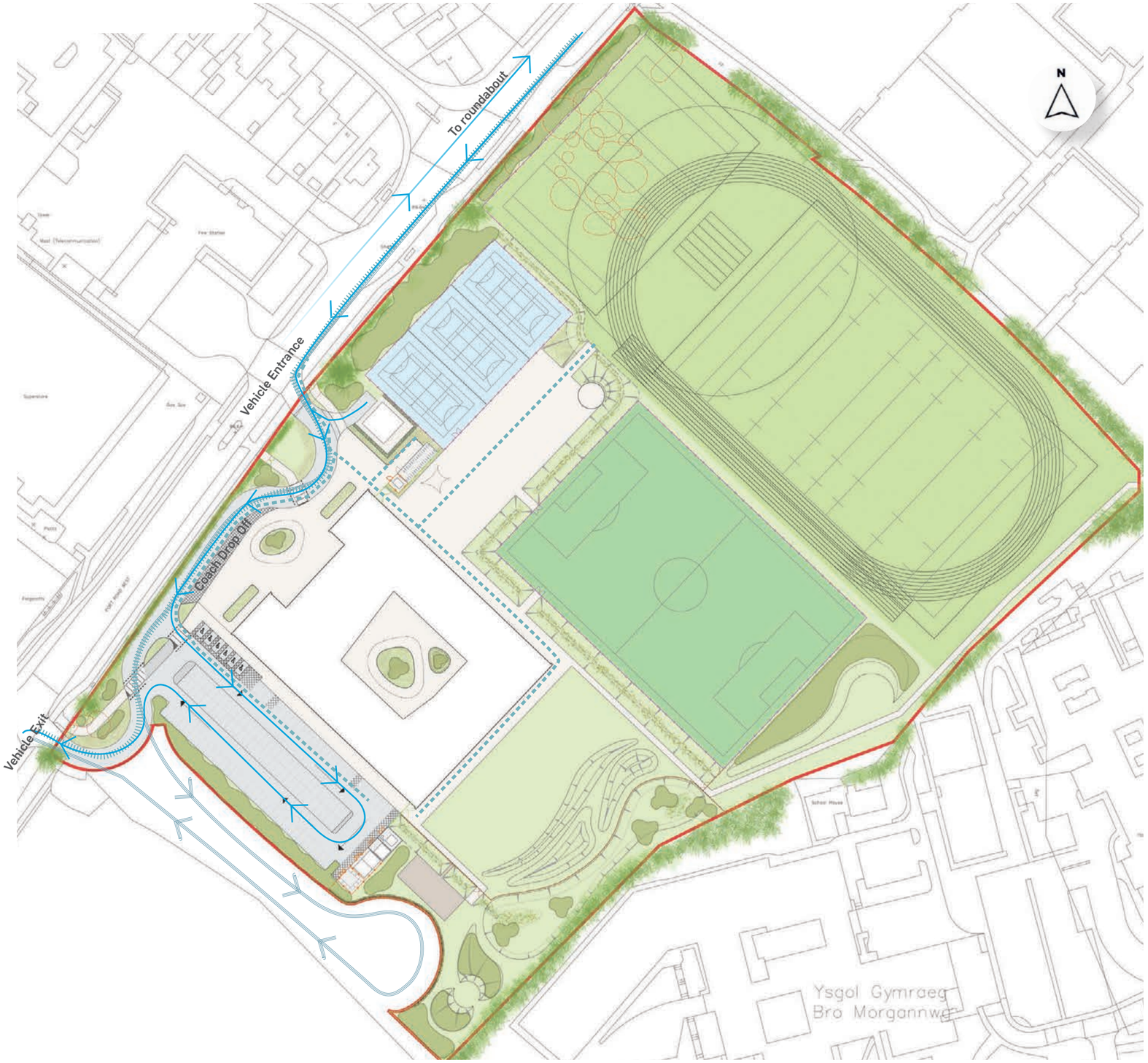
Emergency vehicles

WHS School buses

Ysgol Gwmraeg Bro Morgannwg bus access

3.5.9. Emergency access

Sufficient access and turning space has been provided for emergency vehicles in line with current regulations.



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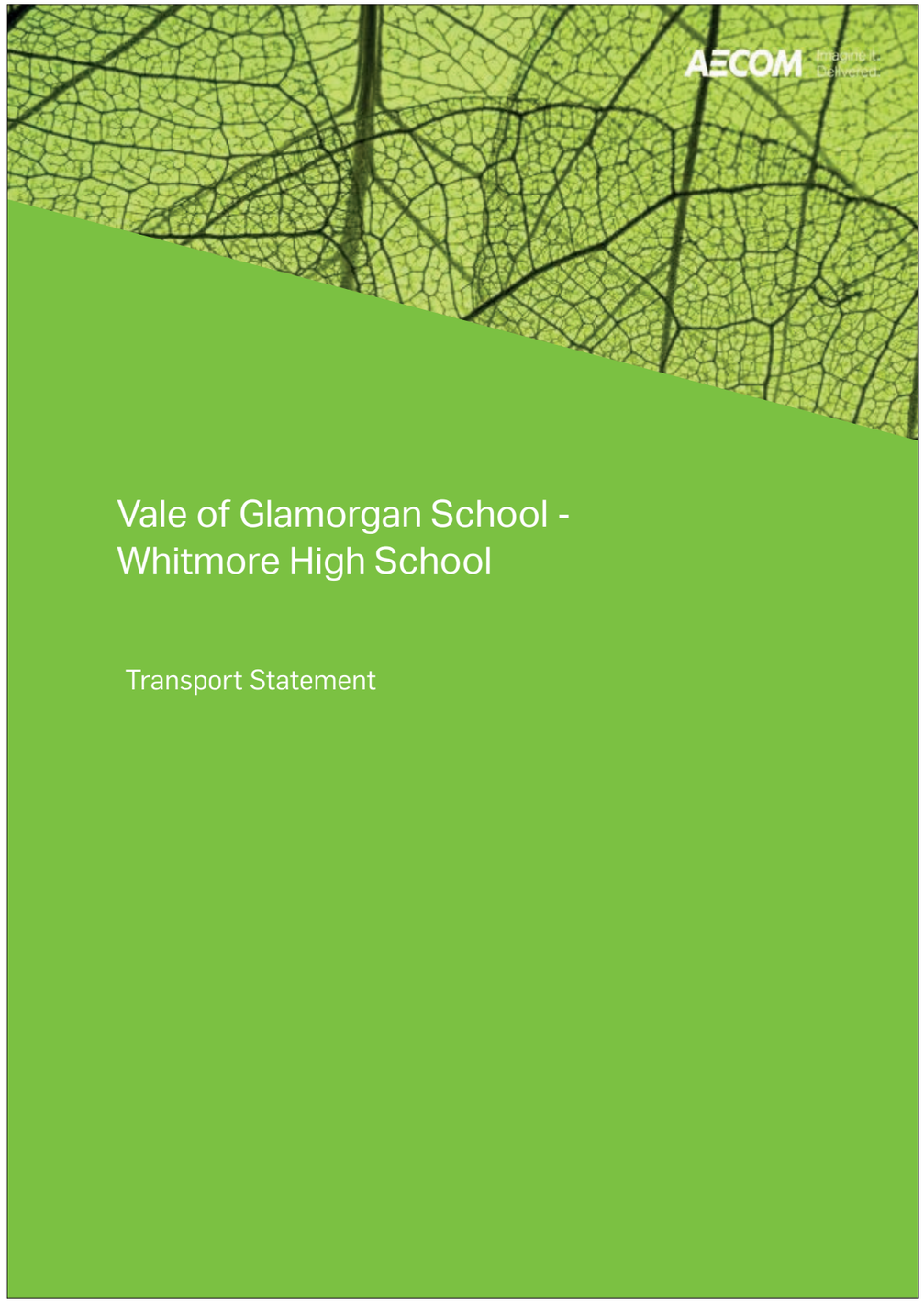
Suscetibilidade hipnótica em Portugal
Escala hipnótica, Waterloo-Stanford Group-C: a validação da versão portuguesa da escala suscetibilidade (Scale of Hypnotic Susceptibility - Bowers, 1993), refere:
I. Demonstrou-se que cerca de 90% dos indivíduos de qualquer idade e condição social podem ser induzidos em transe leves, moderados e profundos (n=720);
II. Contudo, a presença de suscetibilidade hipnótica elevada, os participantes portugueses encontram-se em menor prevalência 11,8%;
III. Apenas perto de 10%, devido a mecanismos psicológicos de defesa são refractários a qualquer indução hipnótica.
(Carvalho, C. et

4. Other Considerations

4.1. Transport Statement



4.2. Energy Statement

The technical note outlines the approach being taken to incorporate an energy strategy which is being developed alongside consideration of the function and form of the building through the Architectural proposals, whilst considering any supplementary planning documents or core strategies. The school shall be designed to meet the requirements of BREEAM New Construction 2014. The purpose of the technical note is to outline the proposed energy strategy to demonstrate the predicted performance of the building in terms of the building fabric, services and renewables, with respect to the UK Building Regulations Part L. Consideration within the design will also address the issue of overheating in order to comply with the relevant thermal comfort criteria.

This technical note analyses the energy and CO2 savings that can be achieved by installing low or zero carbon (LZC) technologies at the proposed development. The technical note also highlights the BREEAM credits targeted for the school to achieve a minimum rating of BREEAM 'Excellent', as part of a Welsh Government requirement.

SNC·LAVALIN ATKINS
Member of the SNC-Lavalin Group

Whitmore High School

Energy Statement Incorporating BREEAM

Whitmore High School

22 January 2019

4.3. Acoustic Report

This report has been prepared to support the planning application in relation to external noise emissions from fixed plant and building services associated with the proposed Whitmore High School development.

In lieu of confirmation from the Vale of Glamorgan Council regarding their site-specific noise criteria for external plant, it is expected that a noise impact assessment in accordance with BS4142:2014 will be required, where the rating level of plant noise is to be equal to or lower than 5dB below the existing background sound level, at the nearest noise sensitive receptors.

The nearest noise sensitive receptors have been identified as residential properties along Liscum Way and Stirling Road, Barry hospital and Bro Morgannwg School.

A baseline noise survey has been carried out at the proposed site and details in Section 0 of this report.

At this stage of the project, the type, quantity and location of fixed mechanical and electrical (M&E) plant associated with the Scheme has not yet been defined to allow a full noise impact assessment to be carried out. Therefore, this report sets out day time maximum plant noise limits to be achieved at the identified receptors, in Table 4. These must be confirmed with the Local Authority. Night time operation of plant is not expected.

Once sufficient information is available a full noise impact assessment is to be carried out and this report revised accordingly.

SNC·LAVALIN ATKINS Member of the SNC-Lavalin Group

Whitmore High School

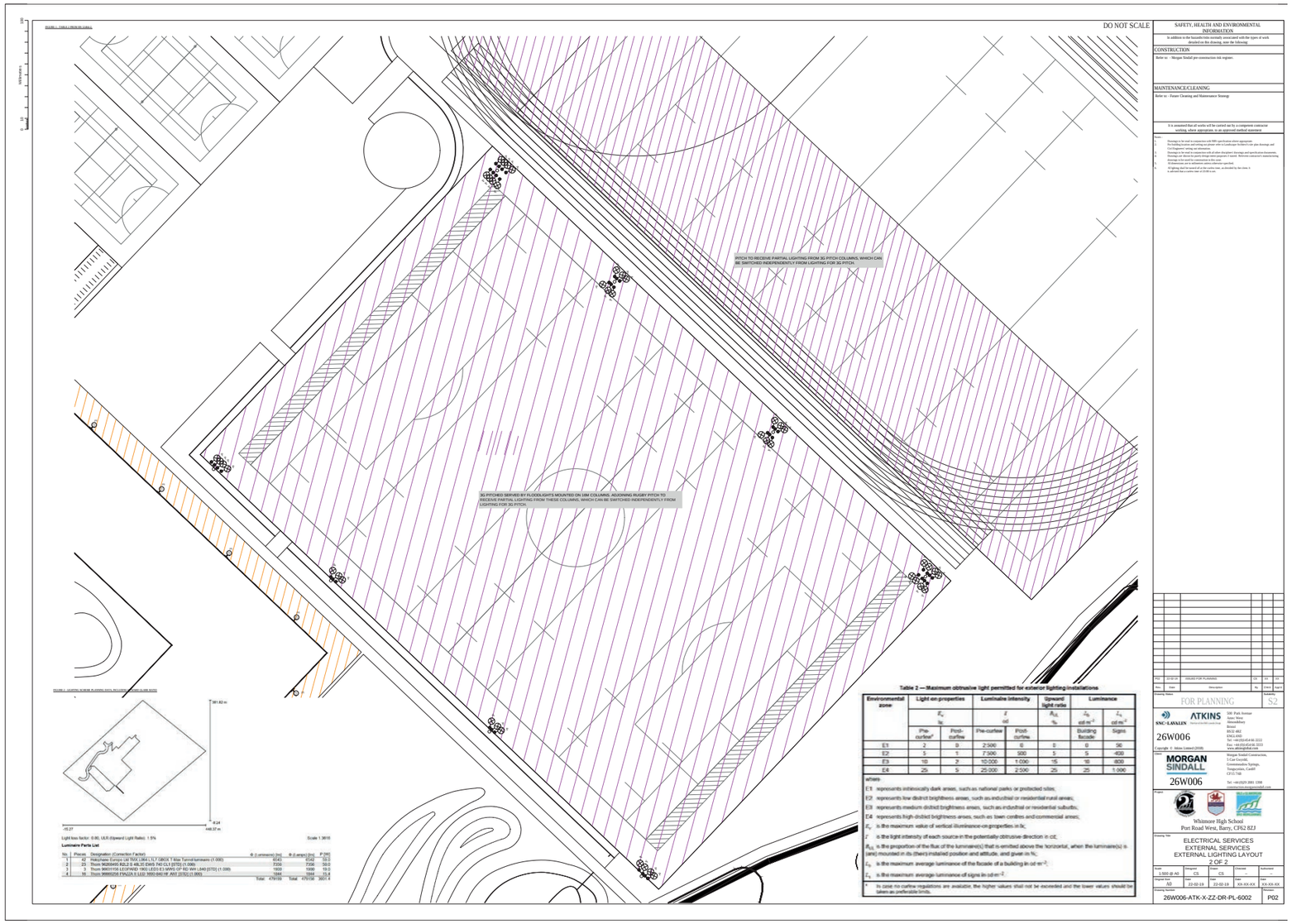
Acoustic Report for Planning

Whitmore High School

23 January 2019

4.4. Lighting Strategy

There will be a full external lighting design for the project including flood lighting for the all weather pitch as shown in the image on this page.



4.5. Flood Consequence Assessment (FCA)

This FCA has assessed flood sources to and from the Proposed Development in context of the existing and proposed development. The Proposed Development is classified as a highly vulnerable development however the majority of the site is located within DAM Zone A, with the exception of a small area towards the south of the site which is located within DAM Zone B.

4.5.1. Flood Sources

The following potential sources of flooding which could affect the Proposed Development have been considered and assessed as follows:

- The current risk from fluvial and tidal sources is considered to be low. The majority of the site is located within DAM Zone A, with a small area in DAM Zone B;
- The risk of groundwater flooding is considered to be low;
- The risk of surface water flooding on site is considered to be low, with the exception of small localised areas where the risk from surface water flooding is high. It is recommended that development is steered away from these small, high risk areas. Any potential off-site impacts will be addressed through a surface water drainage strategy which will be produced during the next stage of the development process once a more detailed Proposed Option is available;
- The risk of sewer flooding is considered to be low; and
- The risk of flooding from other sources is considered to be low.

4.5.2. Surface Water Management

Preliminary runoff and storage calculations have been undertaken, however these are considered conservative as they are based on the entire site area, assuming an overall impermeable area of 40%. The Proposed Development is likely to consist of minor extensions/ new builds occupying a smaller area (<40%) therefore runoff and attenuation calculations should be refined once more details regarding the development are available.

4.6. Flood Risk & Drainage

A Flood Consequences Assessment for the site has been produced by Aecom (Ref 60571313). The assessment concludes that the risk of flooding from all considered sources is low.

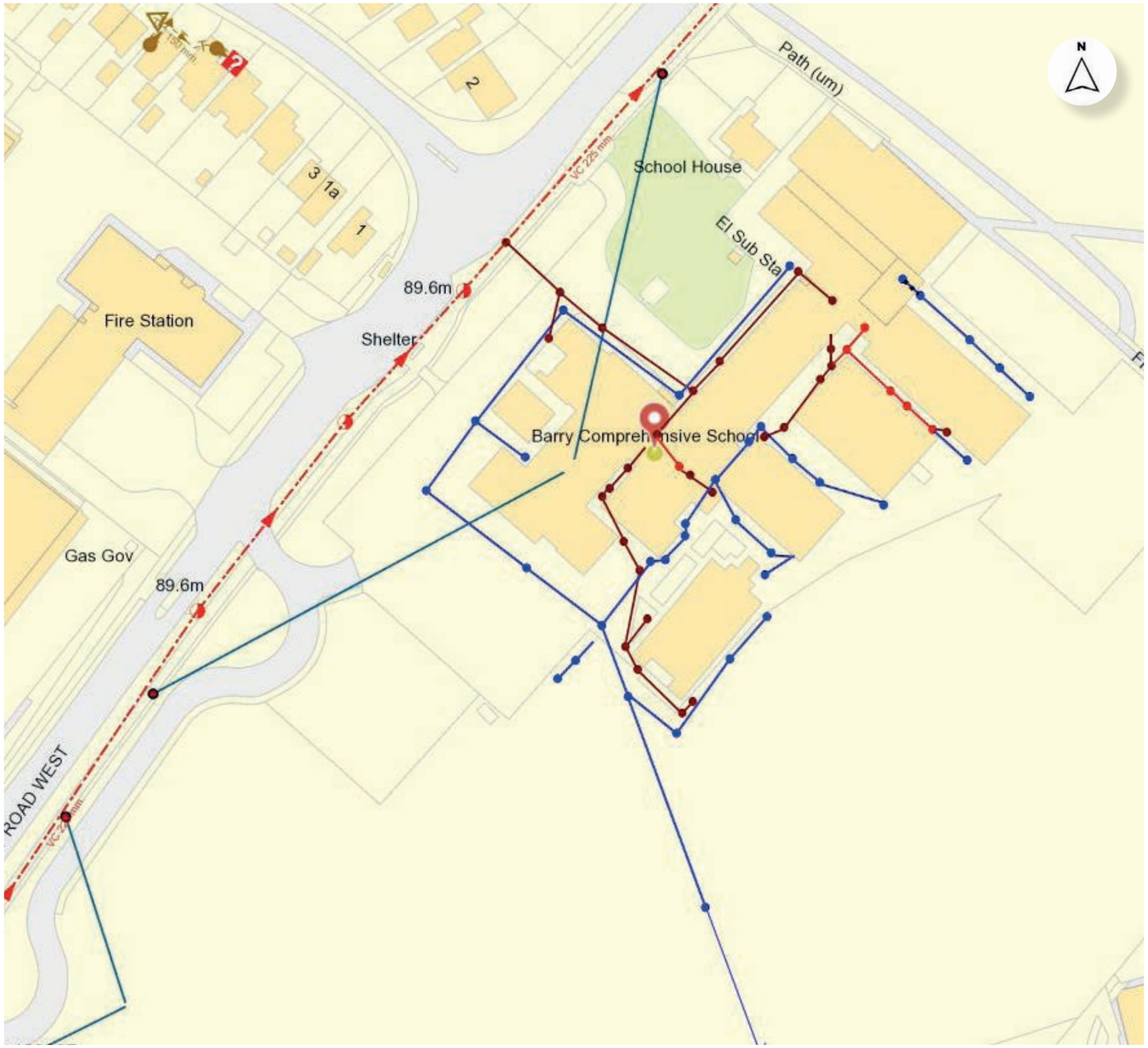
A drainage strategy has been produced separately (reference 26W006-ATK-0-X-RP-D-X-8100). A summary of relevant information follows.

The existing site surface water drainage arrangements consist of a mixed approach where parts of the site drain to a private surface water drain (that also serves Ysgol Gymraeg Bro Morgannwg) and other parts drain to the Dwr Cymru Welsh Water (DCWW) combined sewer on Port Road. Following the redevelopment of the site it is expected that all surface water will be discharged from the site via a new connection to the surface water drain.

The design of surface water drainage systems for all developments in Wales that are larger than 100 square metres must conform to Schedule 3 of the Flood and Water Management Act 2010, which is set out in the "Statutory standards for sustainable drainage systems". The development must seek approval from the SUDS Approval Body (Vale of Glamorgan Council) before construction can commence. Further detail is provided in Section 3.4.

The existing site foul drainage system discharges to the DCWW combined sewer on Port Road. The new building will not be able to make use of this connection, so a new connection point to the combined sewer will be sought. It is necessary to apply to DCWW for any connection to the public sewer under Section 106 of the Water Industry Act 1991. As the connection to the public sewer network will be via a lateral drain extending beyond the property boundary, it is mandatory to first enter into a Section 104 Adoption Agreement under the Act.

Peak foul flows from the development have been calculated as 8.27 l/s. This has been based on a population of 1203, made up of 1100 students and 103 staff. Consumption of water has been based on British Water Code of Practice "Flows and Loads – 4" for school with canteen facilities which is 90 l/h/d. Infiltration has been allowed for at 10 per cent of PG.



Existing site drainage plan

4.7. Sustainable Urban Drainage Systems (SUDS)

In accordance with current legislation the proposed development has considered the use of sustainable drainage systems (SUDS) for surface water management throughout the site. The drainage strategy provides more in depth information on the requirements of the legislation, however it can be summarised by the need to consider the following: runoff destination; runoff hydraulic control; water quality; amenity; biodiversity; construction, operation, maintenance and structural integrity.

The contributing impermeable areas on the site are summarised below:

	Site Area (ha)	Site impermeable area	PIMP
Existing Site	6.13	1.89	30.8%
Redeveloped Site	6.13	2.73	44.5%

There is no proposal to collect and reuse water on the site (rainwater harvesting).

Ground conditions have been investigated at this site and preliminary infiltration testing has been carried out. The infiltration rate observed is 1.1x10-5 m/s. As a result, infiltration will be used as the primary destination for surface water runoff, to the maximum extent possible. Further infiltration testing is to be carried out in locations specific to the proposed infiltration systems. The CIRIA R156 methodology will be followed. Infiltration will be provided in a range of features including: swales, infiltration basins, permeable pavement, rain gardens and bioretention systems.

Flows exceeding the infiltration capability and the storage capacity of the basin are to be discharged at a controlled rate into the surface water sewer which currently serves the site. Through the use of infiltration systems throughout the site the first 5 mm of rainfall in the majority of events will be intercepted, as required in the SUDS standards.

The discharges from the redeveloped site will all be directed to the south. In accordance with the SUDS standards for previously developed sites a reduction in runoff rates of at least 30 per cent will have to be achieved.

To maximise the use of infiltration in the basin the outlet level will be raised, which ensures no discharge from the site in a 1 in 1-year event. Events exceeding this may overflow into a flow control chamber which is proposed regulate discharge to the sewer at a maximum of 60 l/s. Flows backing up from the flow control will utilise additional storage volume in the basin. The proposed maximum discharge rate represents a reduction in discharge rate of approximately two-thirds (60%) in the 2-year 6-hour event and 70% in the 100-year event. The run-off volume from the site in the 100-year 6-hour event can be reduced by infiltration to approximately 680 cubic metres with climate change uplift included in the calculation; this is around 20% less than greenfield predictions. Therefore the rate and volume predictions satisfy the requirements for brownfield sites in the standards.

To manage water quality in the receiving water course, the development will utilise source control of pollutants throughout the SUDS system in accordance with the SUDS Manual index approach.

The SUDS have been designed to contribute to the amenity and biodiversity of the site. They will provide spaces to socialise, green corridors for wildflower and ornamental planting and create variation in the landform. The story of water management will be told through the various elements. A diverse planting scheme will establish to become a valuable food and habitat refuge for wildlife.

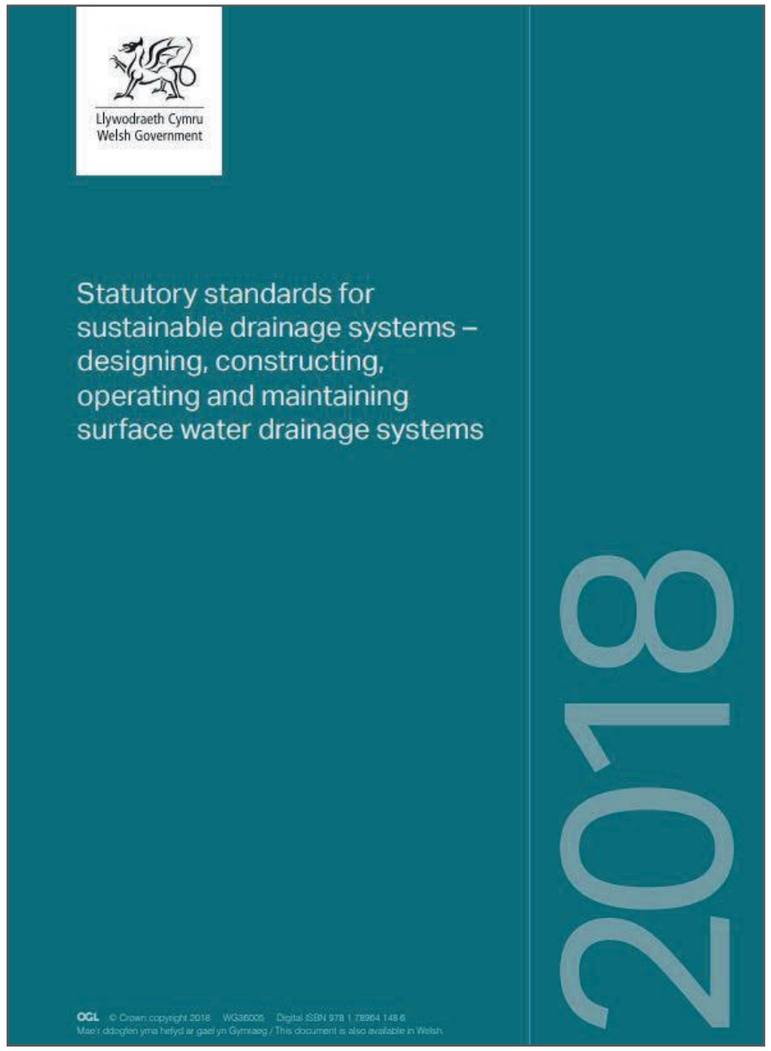
Consideration has been given to the phasing of construction of SUDs, as the existing school facilities need to remain operational during construction.

1. Swale

2. Infiltration basin

3. Bioretention garden

4.Permable paving




1.


2.

3.


4.

4.8. Preliminary Ecology Report

Executive Summary

AECOM was commissioned by Vale of Glamorgan Council to undertake a Preliminary Ecological Appraisal (PEA) and a BREEAM Assessment of the Site of the proposed Whitmore High School in Barry, South Wales.

The assessment is focussed towards specific BREEAM Land use and Ecology Credits LE02, LE03, LE04 and LE05. The assessment includes a desk study and an Extended Phase 1 Habitat Survey. The assessment has been undertaken using BREEAM 2014 criteria.

The Whitmore High School Site is located on the former Barry Comprehensive School Site in Barry, South Wales, OS grid reference ST 10531 6916045. The Site is located within a residential area on the northern outskirts of Barry.

The proposed works are for the demolition of the existing Barry Comprehensive School and construction of a new mixed sex 11-18 school called Whitmore High School. The school will accommodate 900 11-16 year old pupils and 200 Sixth Form pupils and will be comprised of the main school building, playing fields, car parking areas, and 3G sports pitches. The Site will include a habitat area and garden. Construction of the new school building is due to commence in August 2019. The old school building will be demolished once the new school is complete, demolition will commence in August/ September 2021.

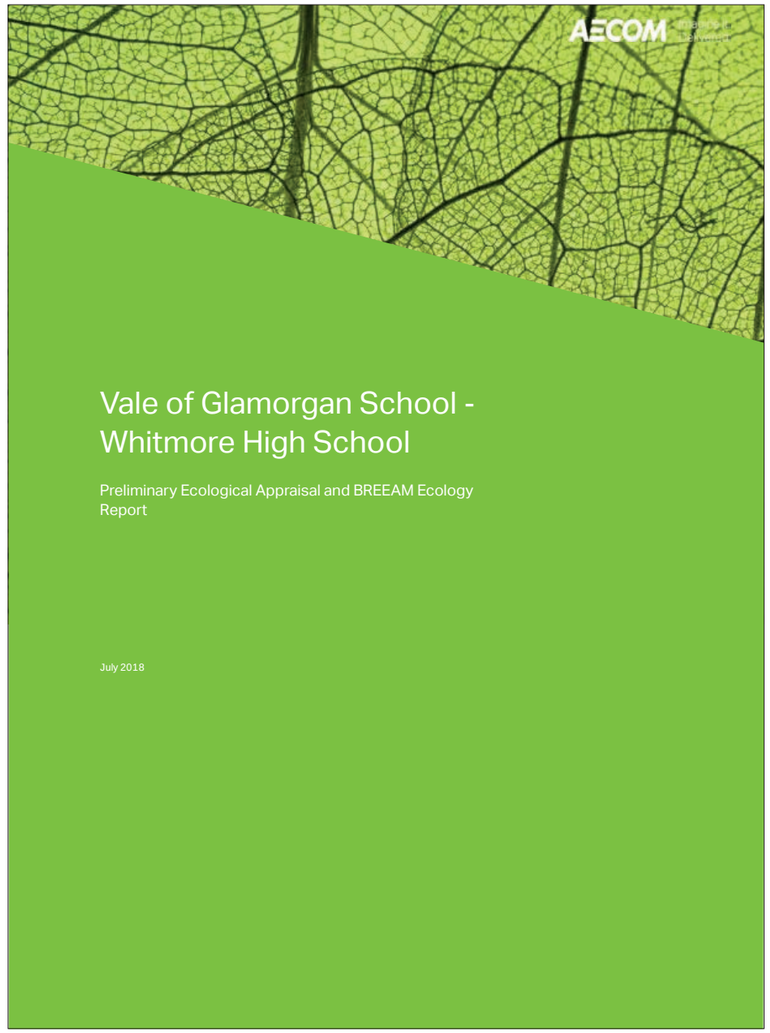
The majority of the Site comprises of amenity grassland, hardstanding and buildings with areas of parkland with scattered trees, ornamental planting, rows of trees, scattered trees, intact species poor hedgerows, fences and wall.

Within the Site Boundary there is potential for generalist invertebrates, breeding birds, foraging, commuting and roosting bats and hedgehog to be present. Based on Drawing Option 06b – Final Master Planning Concept provided in Whitmore High School - RIBA Stage 1 Report (issued 30/05/2018), the works will involve complete removal of amenity grassland, parkland with scattered trees, ornamental planting, hardstanding and buildings and partial removal of a row of trees along the southern boundary. Rows of trees along the eastern boundary, standalone trees and hedgerows will be retained, however without mitigation these features may get damaged during construction. Without mitigation, there is potential for works to impact Protected and Priority species using the Site through habitat loss, injury and killing and disturbance (including external lighting disturbance). Recommendations for mitigation have been provided to avoid and reduce impacts on retained habitats and any Protected Species using the Site.

Buildings have been assessed as being suitable to support roosting bats. Bat surveys are required prior to demolition of the buildings to confirm the presence or likely absence of roosting bats. A European Protected Species License will be required if roosting bats are present and if the works will negatively impact on roosting bats.

The ‘before development’ BREEAM LE03 calculation is based on the Phase 1 Habitat plan (Figure 1). Calculations for ‘after development’ have not been calculated at this stage in the absence of a detailed development plan. The report can be used to guide Site design to achieve LE03 Credits.

As per BREEAM guidance, ‘legal’ mandatory recommendations are requirements for compliance with UK and EU legislation (Appendix A). Additional recommendations outline further measures which could be included to maximise the ecological value of the Site. All of the mandatory recommendations need to be completed as well as at least 6 of the 8 additional requirements to achieve the first credit under LE04. Liaison between ecologists and the architects will be required to achieve these. Some of the additional recommendations will increase species count and can count towards LE03.



4.9. Tree Survey Report

1.0 Introduction

1.1 The purpose of this report is to give an assessment as to the quality and constraints of the trees at Whitemore High School. The findings of this survey will be used to inform future design proposals, to preserve and minimise damage to the important trees on or adjacent to this site.

1.2 This report identifies the quality of the trees on or adjacent to this site as categorised by the British Standard 5837:2012, Trees in relation to design, demolition and construction - Recommendations. The survey and findings as reported here represent an unbiased third party opinion offering professional advice as to the value of the trees on this site. A Tree Constraints Plan (TCP) has been drawn, as found in Appendix 2, to illustrate the constraints identified trees pose to the design of future development.

1.3 Arboricultural constraints within the surveyed site relate primarily to the preservation of trees recommended for retention. Identified trees must be protected during the construction phase through the employment of a combination of protective barriers, ground protection zones and tree safe construction methods, designed by a suitably qualified Arboriculturist.

1.4 The trees' root systems and the associated soil structure is often over looked during the construction process, and can be damaged or altered by compaction, causing major damage to the health of the tree. Generally, the entire root system of the tree is within the top 600mm of soil where it can be easily damaged. A calculated area of ground around the tree should be protected for the duration of the onsite construction phase. In this report it is referred to as the Root Protection Area (RPA).

1.5 No Arboricultural Impact Assessment, Tree Protection Plan or Tree Protection Method Statement are included within this report. No assessment has been made regarding the suitability of the proposed development design within this report.

Arboricultural ASSOCIATION
Professional Member
Membership No – PRO4338

ArbTS

ArbTS - Arboricultural Technician Services

(Tree Consultancy Services)

Stephen Lucocq *BSc (Hons), Tech Cert (ArborA), M.Arbor.A*
Professional Member of the Arboricultural Association
Web site: www.ArbTS.co.uk
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Mobile: 07789 551 591

Arboricultural Report

Including:

Tree Survey Data

&

Tree Constraints Plan (TCP)

To the British Standard 5837:2012
(Trees in relation to design, demolition and construction. Recommendations)

Date – 23rd July 2018

Site – Whitemore High School

Project Reference – ArbTS_489.1_WhitemoreHighSchool

4.10. Planning Policy

National Planning Policy

A detailed consideration of the planning policy context of the site and an assessment of the proposals against this is contained in the Planning Statement which accompanies the planning application, but we set out below an overview of the relevant policies which have informed the application proposals.

Planning Policy Wales (Edition 10) 2018 (figure 1)

Relevant national planning policy is contained with the 10th edition of Planning Policy Wales (PPW), published by the Welsh Government in December 2018.

The primary objective of PPW10 is to ensure that planning system contributes towards the delivery of sustainable development and improves the social, economic, environmental and cultural well-being of Wales, as required by the Planning (Wales) Act 2015, the Well-being of Future Generations (Wales) Act 2015 and other key legislation.

The latest edition of PPW addresses 'Productive and Enterprising Trends and Issues' acknowledges that proposals for educational uses have economic benefits and states that 'enabling training and education... supports progress towards a circular economy.'

PPW10 places an emphasis on creating 'Active and Social Places.' This theme aims to ensure that new development is located and designed in a way which minimises the need to travel and reduces dependency on the private car. The proposal satisfies the 'Active and Social Places' theme of PPW10 given its proximity to the National Cycle Route 88 to the south of the site and the direct bike trail on Port Road West as well as Colcot road. There are also 65 secure cycle parking spaces proposed as part of the scheme which meets the Vale of Glamorgan Supplementary Planning Guidance requirements.

Well-being and Future Generations (Wales) Act 2015

The Wellbeing Future Generations (Wales) Act (WBFG) 2015 aims to improve the social, economic, environmental and cultural well-being of Wales to achieve sustainable development.

The Act puts in place seven well-being goals (refer to figure 2) which public bodies are required to work towards achieving. A holistic approach is required to commit to these goals and not every project will meet all 7 goals. The proposal satisfies a number of the well-being goals insofar that:

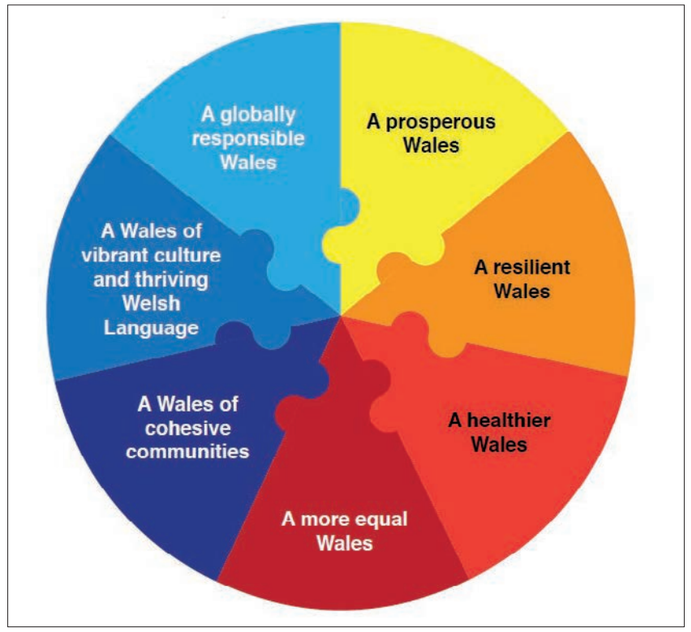
• The proposal of a school promotes education and learning is a key contributor to creating 'A prosperous Wales';

• The WBFG states that a well-educated and skilled population helps to improve the economy and provide employment opportunities;

• The building will meet the BREEAM 'Excellent' accreditation, thereby supporting the goal to become 'a globally responsible Wales.'

• The sustainable design of the building also commits this project to supporting 'A prosperous Wales' as this goal ensures that development is committed to recognising global environmental limits and resource efficiency;

• A new school would help to create 'A more equal Wales' as it would help to improve education and allow pupils to fulfil their potential.



(figure 2) Wellbeing Future Generations (Wales) Act (WBFG) 2015 – 7 well-being goals

(figure 1) PPW (Edition 10) 2018 Cover

Local Planning Policy (figure 3)

The statutory development plan for the purpose of Section 38 (6) of the Planning and Compulsory Purchase Act 2004 is the Vale of Glamorgan Local Development Plan (LDP) which was adopted in June 2017.

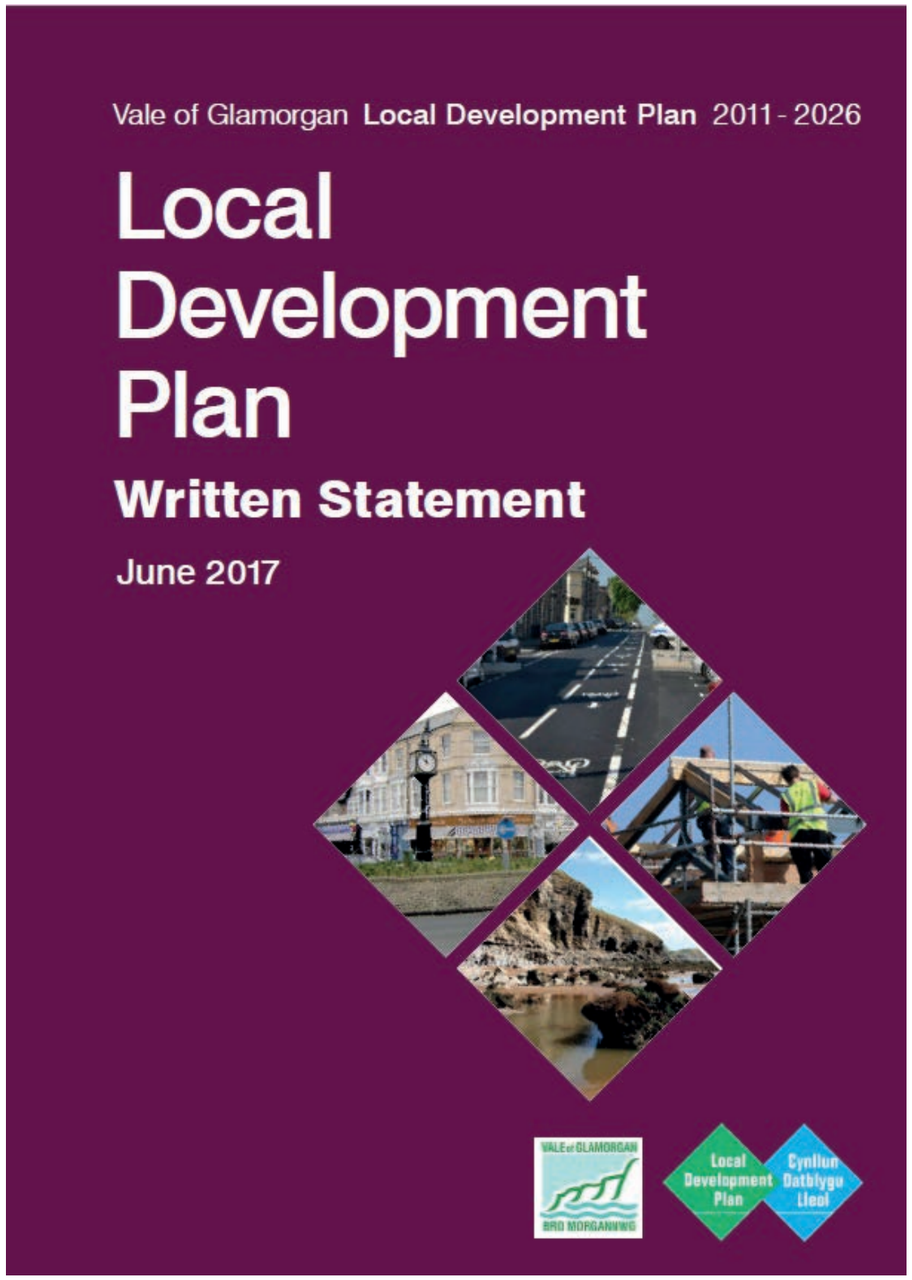
The Proposals Map identifies the school as being within the development limits of Barry, however does not designate the land for any particular use.

The following Local Development Plan policies contained within the LDP are considered to be of relevance to this application. All planning applications will be assessed against the Local Plan policies, which include a broad range of planning related matters:

- Policy SP1 – Delivering The Strategy;
- Policy SP10 – Built and Natural Environment;
- Policy MG6 – Provision of Educational Facilities;
- Policy MG7 – Provision of Community Facilities;
- Policy MD2 – Design of New Development
- Policy MD5 – Development within Settlement Boundaries.

In addition to the adopted (LDP), the Council has approved Supplementary Planning Guidance (SPG). The following SPG's are of relevance:

- Amenity Standards
- Parking Standards (Interactive Parking Standards Zones M)



(figure 3) Vale of Glamorgan Local Development Plan Cover: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