Site:	Wrexham Academy
Client:	Wrexham AFC Limited
Job Number:	784-B068276
Survey Type(s):	Biosecurity Risk Assessment
Date of Review(s):	November 2024
File Location:	M:\Projects\784-B068276_Wrexham___Hedgerow\60_Output\61_WIP\INNS RAMs

1.0 INTRODUCTION

1.1 BACKGROUND

Tetra Tech was commissioned by Wrexham AFC Limited in August 2024 to produce a Biosecurity Risk Assessment and Method Statement for the works taking place on site. This report has been prepared to discharge the condition: "*We consider biosecurity to be a material consideration owing to the nature and location of the proposal. In this case, biosecurity issues concern invasive non-native species (INNS) and diseases (e.g. Chytrid)".* This will detail actions prior to vegetation clearance/habitat removal and will include precautionary measures taken by all staff on site to limit the spread of any invasive non-native species (INNS) and diseases. This report should be read in conjunction with the Wrexham Academy Preliminary Ecological Appraisal Report (Tetra Tech, 2024) as well as the Wrexham GCN RAMs document (Tetra Tech, 2024) which provides further ecological detail of the site.

The purpose of the RAMs report is to:

- To set out measures to be implemented during construction to prevent or minimise the spread of invasive non-native species (INNS) and diseases (e.g. Chytrid & Ranavirus) outside of the scheme boundary
- To comply with relevant wildlife legislation namely Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) and the Invasive Alien Species (Enforcement and Permitting) Order 2019.
- Review the roles and responsibilities of contractors;
- Detail general good practice measures; and
- Detail working methods and reasonable avoidance measures that are to be adopted during site clearance.

This report has been prepared by Assistant Ecologist Carlos Dolado-Hollyman MSc BSc and the conditions pertinent to it are provided in Appendix A.

1.2 SITE LOCATION

The site is comprised of three red line boundary areas, namely “Block 1”, “Block 2”, and the “Groundsperson Building” located in Darland School, Chester Road, Rosset, Wrexham, Wales. The sites are centered at Ordnance Survey National Grid Reference (OS NGR) SJ 37388 57674, SJ 37408 57598 and SJ 37587 57534 respectively (Figure 1). For the purpose of the report, Block 1, Block 2 and the Grounds person Building will henceforth be referred to as “the site”.

The site is comprised of hard standing, modified amenity grassland and Darland High School. The surrounding landscape of residential housing to the north and west, and agricultural fields with associated farm buildings to the south and east.

1.3 DEVELOPMENT PROPOSALS

The development will include the creation of a new Academy training facility at Darland High School comprised of two new buildings which will include changing rooms as well as a small ancillary office, plant areas, meeting rooms, medical room, medical office, gymnasium and a new classroom. A further installation of two shipping containers is proposed in the playing fields to serve the pitches. The location of one of the shipping containers is currently unknown. See Appendix B for Proposed Plan.

2.0 ROLES AND RESPONSIBILITIES

The Reasonable Avoidance Measures Report will be distributed to all relevant personnel involved in the site construction works. An Ecological Clerk of Works (EcoW) will conduct a site walkover with the Biodiversity Champion at the beginning of the project to point out features and points of interest.

2.1 BIODIVERSITY CHAMPION

A Biodiversity Champion will be nominated to influence site activities during construction works in line with the recommendations of this report. The Biodiversity Champion does not need to be an ecologist but should be familiar with this report and have sufficient authority and presence on site to influence activities. Usually, a member of the lead contractor team takes this role during the site Construction Phase. The Biodiversity Champion nominated during the Construction Phase should have a regular site presence. Once management of the site is transferred into the Operational Phase, at the end of the Construction Phase, the role of Biodiversity Champion can be transferred to a new individual (such as the management agent or land agent).

During the Construction Phase the role of a Biodiversity Champion is to advocate for all ecology on site as highlighted by this document as well as preceding documents and to check that the ecological protection and mitigation measures, as specified in this document, are correctly implemented. Advice to the construction teams on all pertinent ecological issues can be sought from a suitably qualified ecologist.

General responsibilities alongside those found in the GCN RAMs (Tetra Tech, 2024) of the Biodiversity Champion during the Construction Phase are:

- Ensuring all site contractors are aware of all biosecurity constraints
- Overseeing that all site contractors know to report any ecological concerns/issues to him/her/them (e.g. any invasive non-native species and specific diseases on site);
- Make sure all contractors are adhering to the biosecurity measures outlined in this document
- Regular contact with an ecologist to review plans, constraints, avoidance and mitigation, unforeseen changes or maintenance of baseline data etc. issues surrounding the development;

General responsibilities of the Biodiversity Champion during the Operational Phase are:

- Specialist contractors are to be appointed, as appropriate, to provide advice and site works in relation to INNS. Relevant contact details the lines of escalation and responsibilities are set out within section 7
- Records of all actions completed as part of the Biosecurity Risk Assessment and Method Statement Plan shall be kept, including area/location of any treatment works, what treatment works were carried out, dates, photographs and any other relevant information.
- Checking the health of any animals found on site (e.g. newts for Chytrid and frogs for Ranavirus)
- Contacting ecologist or relevant organisation if any issues arise.

Where additional issues are identified, or where it is considered that revised maintenance regimes are needed, the Biodiversity Champion should contact a suitably qualified ecologist who can make changes to

management prescriptions as appropriate. The Biodiversity Champion will take photographs, make logbook entries of inspections and produce progress reports as appropriate to evidence that the above responsibilities are being upheld. This monitoring and review process will be carried out as an integral part of the overall management plan.

2.2 CONTRACTOR RESPONSIBILITIES

The contractor responsibilities include the following:

- To adhere to the relevant provisions made within this document and the Construction Management Plan (CMP) prepared by the contractor;
- To adhere to the procedures for great crested newts and other amphibians under the advice of the ECoW / Biodiversity Champion; and
- To contact the Biodiversity Champion, and/or if necessary, the ECoW, regarding any uncertainties or activities that may impact on ecological features on site.

2.3 INVASIVE NON-NATIVE SPECIES

It is unlawful to aid the dispersal of any species listed under Schedule 9 of the Wildlife and Countryside act.

Wildlife and Countryside Act 1981 (WCA)

Part 14 of the Act states that 'if any person plants or otherwise causes to grow in the wild, plants which are included in Part II of Schedule 9, he shall be guilty of an offence'. Therefore it is unlawful to plant or otherwise cause to grow in the wild any plant which is listed in Part II of Schedule 9 of the WCA. The Act also states that persons must take all reasonable steps and must exercise due diligence to avoid committing an offence. It is not an offence to have plants listed under Schedule 9 on your land, however it would be an offence to cause the spread of these plants to new areas. There are currently no invasive non-native species (INNS) within the site (Tetra Tech, 2024).

Table 1: List of invasive plant species listed in Part II of the Schedule 9 of the Wildlife and Countryside Act 1981.

Common Name	Scientific Name	Common Name	Scientific Name
Australian swamp stonecrop or New Zealand pygmyweed	*Crassula helmsii*	Japanese rose	*Rosa rugosa*
Californian red seaweed	*Pikea californica*	Japanese seaweed	*Sargassum muticum*
Curly waterweed	*Lagarosiphon major*	Laver seaweeds (except native species)	*Porphyra* spp
Duck potato	*Sagittaria latifolia*	Yellow azalea	*Rhododendron luteum*
Entire-leaved cotoneaster	*Cotoneaster integrifolius*	Parrot's-feather	*Myriophyllum aquaticum*
False Virginia creeper	*Parthenocissus inserta*	Perfoliate alexanders	*Smyrnium perfoliatum*
Fanwort or Carolina water-shield	*Cabomba caroliniana*	Pontic rhododendron	*Rhododendron ponticum*
Few-flowered garlic	*Allium paradoxum*	Purple dewplant	*Disphyma crassifolium*

Floating pennywort	*Hydrocotyle ranunculoides*	Red algae	*Grateloupia luxurians*
Floating water primrose	*Ludwigia peploides*	Rhododendron	*Rhododendron ponticum*
Giant hogweed	*Heracleum mantegazzianum*	Small-leaved cotoneaster	*Cotoneaster microphyllus*
Giant kelp	*Macrocystis* spp.	Three-cornered garlic	*Allium triquetrum*
Giant knotweed	*Fallopia sachalinensis*	Variegated yellow archangel	*Lamiastrum galeobdolon* subsp. *argentatum*
Giant rhubarb	*Gunnera tinctoria*	Virginia creeper	*Parthenocissus quinquefolia*
Giant salvinia	*Salvinia molesta*	Wakame	*Undaria pinnatifida*
Green seafingers	*Codium fragile*	Wall cotoneaster	*Cotoneaster horizontalis*
Himalayan cotoneaster	*Cotoneaster simonsii*	Water fern	*Azolla filiculoides*
Hollyberry cotoneaster	*Cotoneaster bullatus*	Water hyacinth	*Eichhornia crassipes*
Hooked asparagus seaweed	*Asparagopsis armata*	Water lettuce	*Pistia stratiotes*
Hottentot fig	*Carpobrotus edulis*	Water primrose	*Ludwigia grandiflora*
Hybrid knotweed	*Fallopia japonica* × *Fallopia sachalinensis*	Water primrose	*Ludwigia uruguayensis*
Indian (Himalayan) balsam	*Impatiens glandulifera*	Waterweeds	*Elodea* spp.
Japanese knotweed	*Reynoutria japonica*		

Table 2: List of invasive amphibian species in the UK

Common Name	Scientific Name	Common Name	Scientific Name
Alpine newt	*Mesotriton alpestris*	Marble newt	*Triturus marmoratus*
Midwife Toad	*Alytes obstetricans*	Edible frog	*Pelophylax esculentus*
Marsh frog	*Pelophylax ridibundus*	Italian crested newt	*Triturus carnifex*
Bull frog	*Lithobates catesbeianus*	African clawed toad	*Xenopus laevis*

2.4 AMPHIBIAN DISEASES

Chytrid

A species of chytrid fungus *Batrachochytrium salamandrivorans* which translates as salamander skin-eating fungus threatens native amphibian populations in the UK. The fungus has recently devastated fire salamander population in Netherlands and Belgium in as little as 2-3 years and has entered the UK through the pet trade via newt species imported from SE Asia. The disease is fatal to UK amphibian species including great crested newt *Triturus cristatus*.

Symptoms of infection in adult amphibians include reddening of the skin, excessive shedding of skin, skin ulceration (especially at the tips of the toes), abnormal posture, apparent "seizures" or unusual behaviours such as nocturnal species being active during the day (see photos 1 and 2 below).



Photograph 1: Chytrid in frog - reddening of the skin and skin ulceration



Photograph 2: Chytrid in newt - excessive shedding of skin

Ranavirus

Ranavirus is found mainly in common frogs, occurring less commonly in other amphibians. It causes two forms of disease in frogs: skin ulcers and internal bleeding. In the first case ulcers can readily be seen on the skin, especially on the underside of the pelvic region and on the hind limbs and feet, in extreme cases causing loss of digits. Bleeding is sometimes evident from the mouth or cloaca or as a reddening of the underside (see photograph 3).

The clearest indications that a frog population is suffering from ranaviral disease are mass mortalities of adults in or around the pond in summer, particularly if you notice frogs that are very thin or lethargic a few days before.



Photograph 3: Ranavirus in frog - skin ulcers and internal bleeding

3.0 GOOD PRACTICE GUIDELINES

This section describes the general good practice activities to be carried out during any pre-construction habitat clearance and the Construction Phase of the proposed development. These activities have been designed to reduce the likelihood that any negative impacts will occur to ecological receptors on or adjacent to the site.

3.1 GENERAL GOOD PRACTICE

INVASIVE NON-NATIVE SPECIES

To minimise the risk of spreading invasive non-native species it is recommended that the below guidance is implemented into a Construction Management Plan (CMP) and be monitored by the Biodiversity Champion:

- All operatives and consultants working on the site should be provided with a toolbox talk provided by the Ecological Clerk of Works (ECoW) or Biodiversity Champion, which highlights relevant INNS (such asHimalayan balsam *Impatiens glandulifera* and Japanese knotweed *Reynoutria japonica)*, the identification of INNS and describes the strategy used for marking and identifying them during site clearance (if found to be present) and stopping them from spreading. Toolbox to be signed by contractors on site (see Appendix C).
- Should any INNS be identified on site, the stand/plant should be clearly marked to limit the potential for accidental spread, an ecologist or specialist contractor should be contacted for guidance.
- High visibility tape or netting should be erected around any invasive stands, wherever possible to 7m from the outer edge of the stand in all directions as the roots can spread significantly underground. Where practicable, all INNS should be marked in the same way or with high visibility line paint where possible with an exclusion zone of 3m from the outer edge of the stand/plant.
- An appropriate vehicle and equipment washdown area should be designated to contain the spread of any invasive plant material from site. Vehicles and other equipment must be thoroughly cleaned in the designated wash down area before being used in uncontaminated areas.
- The wash-down area should be provided to clean boots and tools as soon as contractors leave this area to prevent spread of any invasive plant material from site.
- All material resulting from vehicle wash-down must be collected and disposed of at a landfill site which is licenced to receive Schedule 9 plant waste.
- An annual monitoring visit by a suitably qualified ECoW, botanist or contractor may be required between April and September for several years after completion to determine whether species such as Japanese Knotweed have colonised site and require further treatment.

AMPHIBIAN DISEASES

To minimise the risk of spreading disease it is recommended that the below guidance is implemented into a Construction Management Plan (CMP) and be monitored by the Biodiversity Champion:

General guidance

- If works are to be conducted in areas where amphibians could be identified such works should be undertaken under the supervision of an Ecological Clerk of Works.
- Handle common amphibians only when necessary and handle great crested newt only if the species is in danger of being killed or injured and contact the project ecologist for advice.
- If handling amphibians, or if contact with standing water is necessary, wear powder-free disposable vinyl gloves which you rinse before contact with the amphibians. Use vinyl rather than latex or nitrile because the latter two may be harmful to amphibians.
- If entering water, footwear should be washed and disinfected (see disinfection procedures below) immediately after entering water.
- Do not release amphibians anywhere except at the place of capture.
- Treat dead or sick amphibians as a high infection risk and do not handle unless necessary.
- If dead or diseased amphibians are found, this should be registered with the Garden Wildlife Health project and send a sample.

DISINFECTION PROCEDURES

Disinfect any equipment that has come into contact with amphibians or standing water. This includes footwear (boots) and any ground moving equipment.

To disinfect equipment the following will be required:

- a bucket or washing up bowl
- a brush
- disinfectant (bleach or Virkon refer to list below)
- disposable or washing up gloves (to wear while disinfecting)
- a source, or container, of clean water

1. Use brush to scrub off any debris, plant fragments, mud etc.

2. Rinse with water.

3. Soak in bleach solution for at least 5 minutes, or Virkon for at least one minute.

4. Rinse with clean water.

5. If possible, allow to dry before next use.

DISINFECTION SOLUTIONS

Bleach (diluted with water to produce a 4% solution) Bleach is usually diluted in water at 1:10 or 1:100 (depending on manufacturer).

Virkon (10mg/ml, as per supplier's instructions).

Virkon-S (licensed for veterinary/animal livestock applications but not human use) can also be purchased in tablet form. One 5mg tablet can be dissolved in 500ml of water.

Pond water can be used to make up solutions so long as it contains little or no organic matter (as this reduces disinfectant efficacy).

4.0 CONCLUSION

There should be no invasive non-native or biosecurity constraints to construction works if the provided RAM's are implemented throughout works. Any queries are to be directed to the relevant contact as detailed in Section 5.

5.0 USEFUL CONTACTS

Table 3 below provides useful local contacts which may be of use.

Table 3: Local contacts of ecological and animal welfare organisations.

Organisation	Contact
Tetra Tech	**Tetra Tech** 2nd Floor 11 York Street Manchester M2 2AW Email: ecology.manchester@tetratech.com Tel: **0161 874 8722**
	ECoW Queries: Candice Howe **07773166760** candice.howe@tetratech.com Bronwyn Dennis (non-bat related queries) **07929101796** BRONWYN.DENNIS@tetratech.com
Local Ecology Records Centre	**Cofnod - North Wales Environmental Information Service** Intec Ffordd y Parc Parc Menai Bangor Gwynedd LL57 4FG Email: record@cofnod.org.uk Tel: **01248 847456**
Wildlife Hospital	**Animal Trust Vets CIC - Wrexham** 31 Caia Rd Wrexham LL13 8DS Tel: **01978 802658**
Local Wildlife Trust	**North Wales Wildlife Trust** Llys Garth Garth Road Bangor Gwynedd LL57 2RT

	Email: info@northwaleswildlifetrust.org.uk Tel: **01248 351 541**

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Prepared by:	**Checked by:**	**Approved By:**
Carlos Dolado-Hollyman	Gareth Parry	Phil Preston
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FIGURES

Figure 1 – Ecological Features and Constraints – Main Works



Site Location Plan

Wrexham Academy

Wrexham AFC Limited

Legend

Site Boundary

Site Boundary 30m Buffer

Notes:

Drawn by: AARON.HOWARD

Checked by: Bronwyn Dennis

Figure No. 1

Revision No. A

24 September 2024

0 20 40 60 80 Meters

Scale 1:1,500 @A3

British National Grid

NGR: 337490E 357603N

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APPENDICES

APPENDIX A: REPORT CONDITIONS

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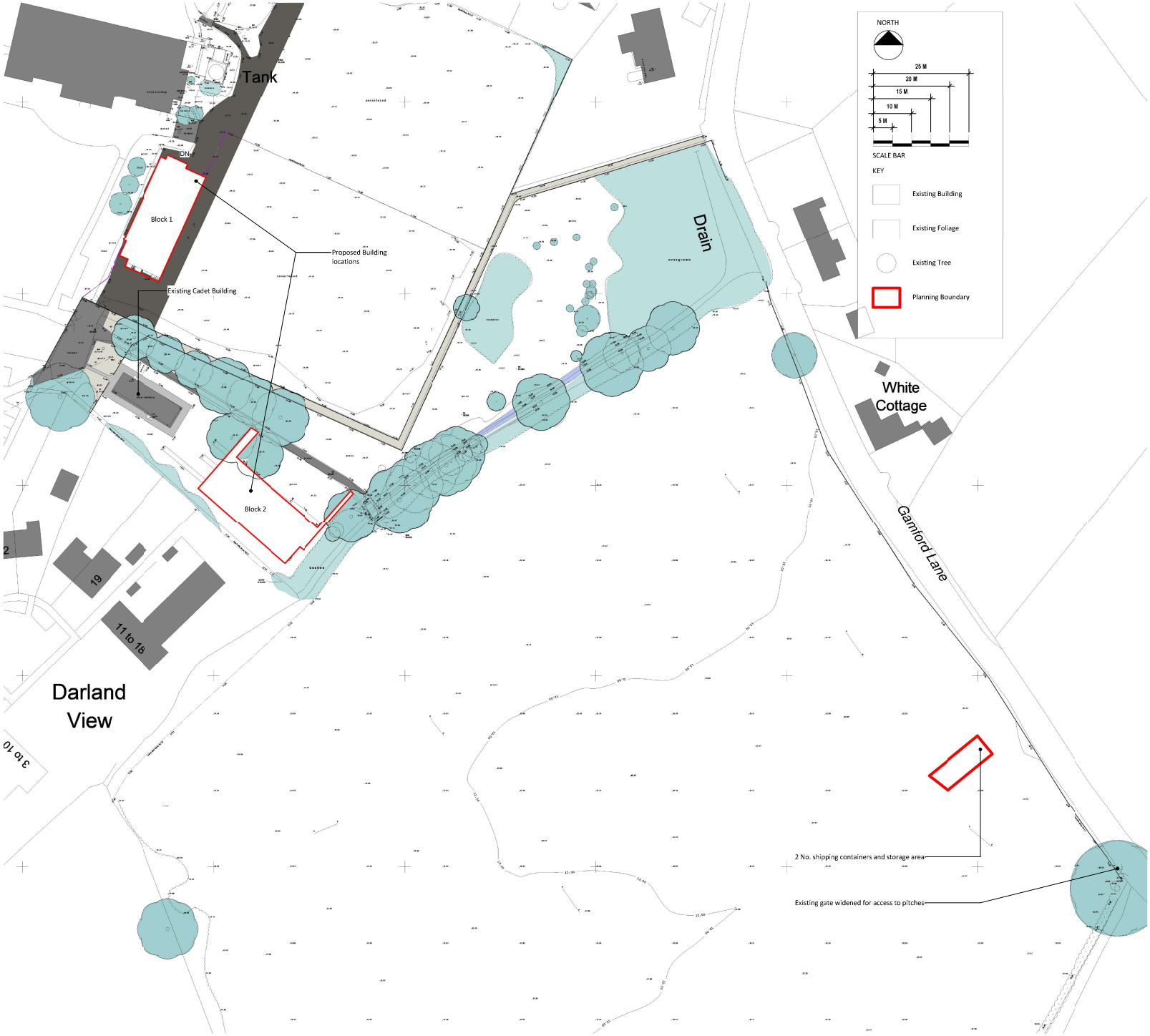
The report refers, within the limitations stated, to the environment of the site in the context of the surrounding area at the time of the inspections'. Environmental conditions can vary and no warranty is given as to the possibility of changes in the environment of the site and surrounding area at differing times. No investigative method can eliminate the possibility of obtaining partially imprecise, incomplete or not fully representative information. Any monitoring or survey work undertaken as part of the commission will have been subject to limitations, including for example timescale, seasonal and weather-related conditions. Actual environmental conditions are typically more complex and variable than the investigative, predictive and modelling approaches indicate in practice, and the output of such approaches cannot be relied upon as a comprehensive or accurate indicator of future conditions. The "shelf life" of the Report will be determined by a number of factors including; its original purpose, the Client's instructions, passage of time, advances in technology and techniques, changes in legislation etc. and therefore may require future re-assessment.

The whole of the report must be read as other sections of the report may contain information which puts into context the findings in any executive summary.

The performance of environmental protection measures and of buildings and other structures in relation to acoustics, vibration, noise mitigation and other environmental issues is influenced to a large extent by the degree to which the relevant environmental considerations are incorporated into the final design and specifications and the quality of workmanship and compliance with the specifications on site during construction. Tetra Tech accept no liability for issues with performance arising from such factors.

APPENDIX B: PROPOSED PLAN

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1 Site Plan - Planning
1 : 500

NOTES
All dimensions and levels to be checked on site

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P03	02.10.24	WR	REVISED PLANNING
P02	02.08.24	WR	PLANNING ISSUE
P01	19.07.24	WR	DRAFT PLANNING ISSUE

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key plan

drawing title
Wrexham Academy - Site Plan

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PLANNING	S0	P03

bim project | origin | zone | level | type | role | 5-digit no.
WYA-AFL-ZZ-ZZ-DR-A-20005

APPENDIX C: TOOLBOX SIGN IN

Name	Date	Signature