

Vale Consultancy

CONSULTING CIVIL & STRUCTURAL ENGINEERS

FLOOD CONSEQUENCE ASSESSMENT (FCA)

Acorn Nurseries,
Alma House,
Lighthouse Road,
Duffryn,
NP10 8TG

Prepared for: Acorn Nurseries
Project Ref: 24627

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All the Natural Resources Wales (NRW) mapping data used is under special license. Data is current as of **June 2026** and is subject to change.

The information presented and conclusions drawn are based on statistical data and are for guidance purposes only. The study provides no guarantee against flooding of the study site or elsewhere, nor of the absolute accuracy of water levels, flow rates and associated probabilities.



1 INTRODUCTION

1.1 Purpose of Report

Vale Consultancy were commissioned by Acorn Nurseries (“The Client”) to undertake a Flood Consequence Assessment (FCA) in support of a planning application (Ref: 25/1088) for the proposed development at Acorn Nurseries, Alma House, Lighthouse Road, Duffryn, NP10 8TG (“the site”).

1.2 Aim and Objectives

This assessment is intended to address the requirements of the Technical Advice Note (TAN) 15 in relation to the provision of a site-specific flood consequence assessment for the proposed development. This assessment aims to satisfy the following core objectives:

- Assess whether the site is likely to be affected by flooding now and in the future as a consequence of Climate Change;
- Provide an assessment of the vulnerability of the development and its suitability in relation to the identified flood risk;
- Provide an opinion of the likely impacts of the development on flooding elsewhere; and,
- Where required, present flood mitigation measures necessary to keep the proposed development and occupants safe, whilst ensuring flood risk is not increased elsewhere.

1.3 Relevant Documents

This assessment has been informed by the following documents, policy and information:

- Technical Advice Note 15: Development, Flooding and Coastal Erosion, Welsh Government, March 2025;
- Planning Policy Wales, Welsh Government, February 2024;
- Flood Consequences Assessments: Climate Change Allowances, Welsh Government, March 2026;
- Future Wales - the National Plan 2040, Welsh Government, February 2021;
- Newport City Council (NCC) Local Development Plan (LDP) 2011-2026 – January 2015
- South East Wales – Strategic Flood Consequence Assessment (SFCA) (Stage 1) – JBA Consulting, November 2022
- NCC Local Flood Risk Management Strategy (LFRMS) 2024-2030
- 1m resolution LiDAR data – downloaded May 2026
- Soilscales, Soil and AgriFood Institute, Cranfield University – accessed online May 2026
- British Geological Survey (BGS) Drift & Geology Maps – accessed online May 2026



2 SITE DETAILS & PROPOSED DEVELOPMENT

2.1 Site Location

The approximately 2564m² site is located at National Grid Reference (NGR) ST 294 857 (329498, 185743) as shown in **Figure 1** and **Appendix A**.



Figure 1 - Site Location Satellite Imagery Plan

2.2 Existing Site

The site currently comprises the existing main nursery building and external play area, along with associated parking, pathways and gardens. Vehicular access to the site is provided via Lighthouse Road to the northeast (see **Appendix A**).

2.3 Proposed Development

The proposal comprises a new single storey outdoor classroom in the rear gardens, located in the southern region of the site (see **Appendix A**).

TAN15 classifies the proposal as a 'Highly Vulnerable' development when considering flood risk.

2.4 Site Topography

In the absence of a site-specific topographical survey which covers the area of the proposed classroom, freely available 1m resolution LiDAR data has been downloaded for the site and local area. A visual representation of the LiDAR is presented within **Figure 2**. Site levels are shown to range between 7.38 – 9.39mAOD. This is a difference in ground level of 2.01m.

Proposed Classroom

Based on the LiDAR mapping, ground levels at the proposed classroom building footprint are shown to range between 8.12 - 8.95mAOD. This is a difference of 0.83m.



In the absence of a proposed FFL for the classroom, an Assumed Ground Floor Level (AGFL) of **8.535m** can be adopted for the purposes of this assessment, based on the average ground level derived from the LiDAR mapping.

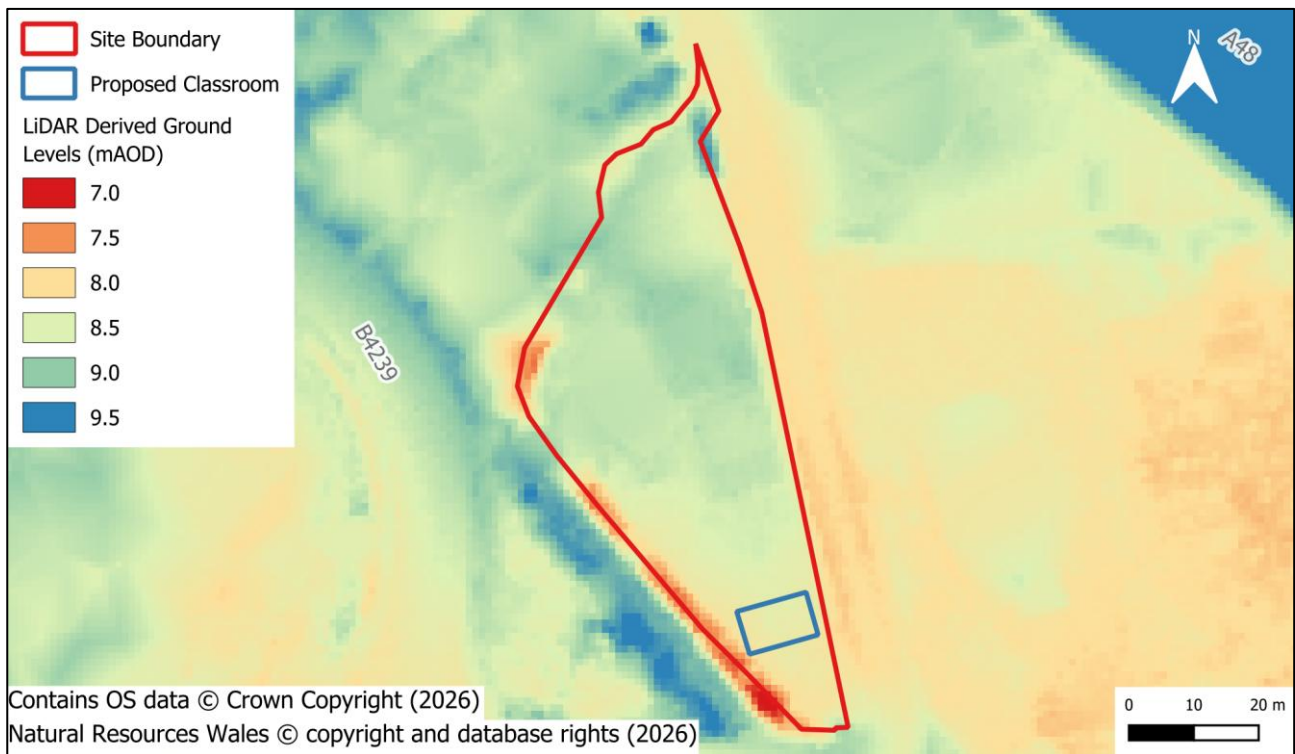


Figure 2 – 1m Resolution LiDAR DTM (mAOD)

2.5 Existing Ground Conditions

According to Soilsapes soils dataset produced by the Cranfield Soil and AgriFood Institute, soil conditions at the site and within the surrounding area are described as freely draining loamy floodplain soils with naturally shallow groundwater tables.

Online BGS mapping shows the bedrock geology beneath the site to consist of Mercia Mudstone Group-Mudstone. This is defined by NRW as a 'Secondary A' aquifer. These are permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These sedimentary rocks are fluvial, lacustrine and marine in origin. They are detrital, deposited in lagoons or shallow seas; where a hot, arid climate also leads to the precipitation of beds of evaporites.

The bedrock is overlain by Alluvium-Clay, silt, sand and gravel. This is also defined as a 'Secondary A'. These sedimentary deposits are fluvial in origin. They are detrital, ranging from coarse- to fine-grained and form beds and lenses of deposits reflecting the channels, floodplains and levees of a river or estuary (if in a coastal setting).



2.6 Local Hydrology

The nearest NRW designated main river to the site is the adjacent Pontygwew Reen, located along the northwestern and southwestern boundaries of the site, flowing in a southeasterly direction towards its discharge into the Wharf Reen (approximately 2.45km to the southeast of the site). Additionally, the Ebbw River is located approximately 67m to the northeast, flowing in a southeasterly direction towards its confluence with the River Usk (approximately 3km to the southeast of the site). Moreover, there is an adjacent unnamed watercourse which confluent with the Pontygwew Reen, located approximately 13m to the northwest.

All local hydrology features can be seen in **Figure 3** below.

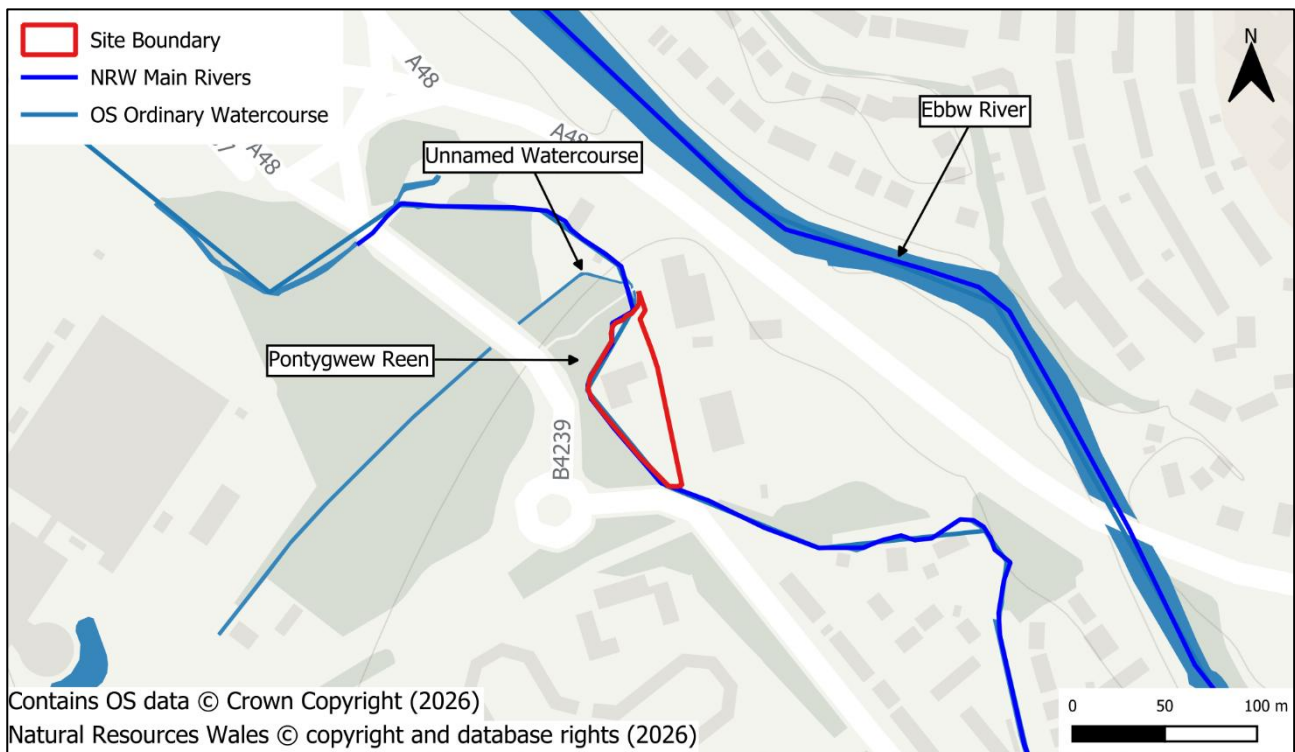


Figure 3 – Local Hydrology



3 FLOOD HISTORY

3.1 National Records

The NRW Recorded Flood Extents (**Figure 4**) indicate that there are no records of historic flooding at or within the immediate vicinity of the site. The nearest recorded flood outline to the site is located approximately 1.42km to the northwest. This event took place in 1979 as a result of the Ebbw River exceeding its channel capacity with no raised defences.

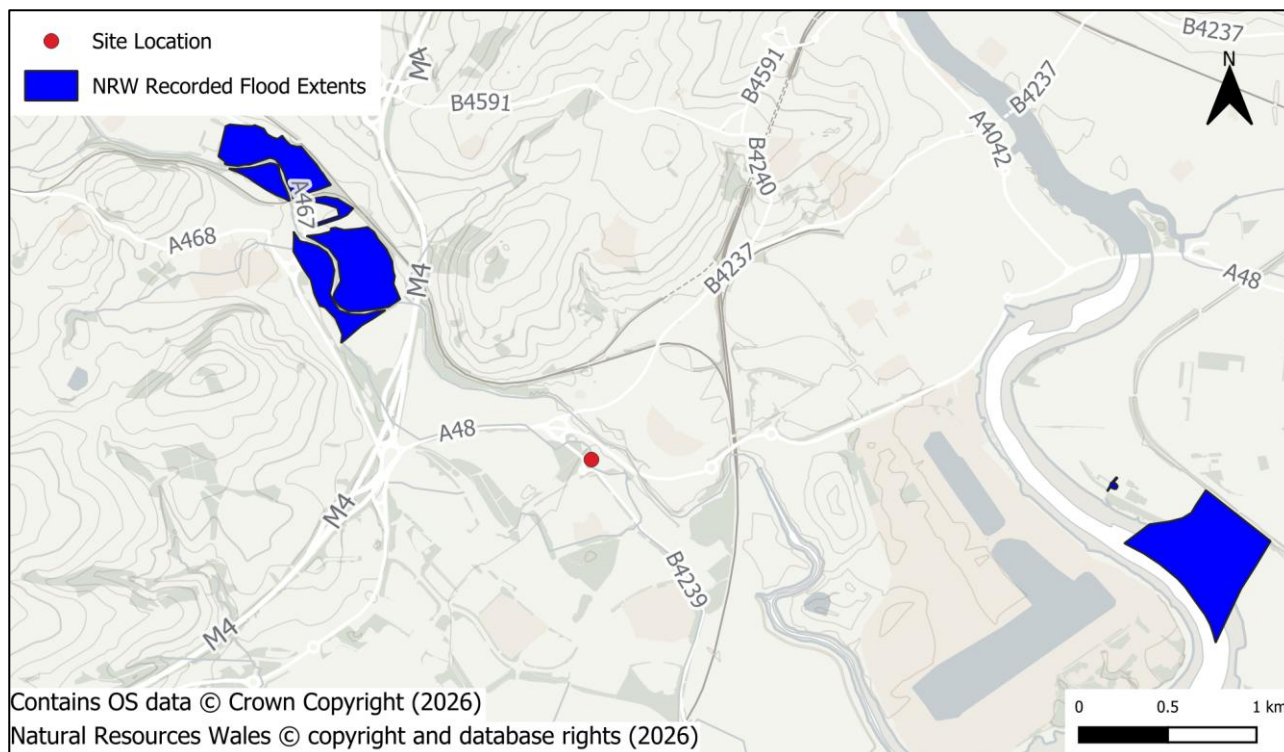


Figure 4 – NRW Recorded Flood Extents

3.2 Local Authority and Strategic Flood Information

Information Source	On Site	Within 250m
LDP (2011-2026)	N/A	N/A
SFCA (2022)	N/A	N/A
LFRMS (2024-2030)	N/A	NRW has identified Duffryn as among six main flood risk areas in Newport; however, the NCC Flood Risk Historic Flood Incidents mapping (Figure 6) shows no historical flood incidents within 250m of the site. This is consistent with the flood extents shown in the NRW Recorded Flood Extents dataset (Figure 4).

Table 1 - Information from Local Authority and Strategic Flood sources regarding historic flooding



3.3 Additional Information

No further information was identified regarding instances of flooding at or within the vicinity of the site.

Historic Flooding Summary

The NRW Recorded Flood Extents dataset indicates the site is not within a recorded flood outline. In addition, no information was found online regarding historic flooding at or within the vicinity of the site.



4 FLOOD RISK EVALUATION

The following sections provide an evaluation of all potential sources of flooding to the site.

4.1 Flood Risk Summary

The Flood Map for Planning (FMFP) indicates the site to be located within Flood Zone 3 (tidal/fluvial). Moreover, the southeastern border of the site is marginally encroached by a localised area of pluvial Flood Zone 2, with the remainder of the site being located within Flood Zone 1.

The flood zone definitions are as follows:

Flood Zone 1: Land that has been assessed as having a less than a 0.1% (1 in 1000) chance of flooding in a given year, including the effects of climate change.

Flood Zone 2: Land that has been assessed as having between a 1% and 0.1% chance of river flooding (fluvial) / surface water flooding (pluvial) or between a 0.5% and 0.1% chance of flooding from the sea (tidal) in a given year, including the effects of climate change.

Flood Zone 3: Land that has been assessed as having a greater than 1% chance of river flooding (fluvial) / surface water flooding (pluvial) or a greater than 0.5% chance of flooding from the sea (tidal) in a given year, including the effects of climate change.

4.2 Sea (Tidal / Coastal) and Rivers (Fluvial)

The site is located within tidal Flood Zone 3. Moreover, the NRW Flood Risk Assessment Wales (FRAW) mapping (Tidal/Coastal) indicates that the site is located within an area of low risk from the sea (**Figure 5**). This mapping takes into consideration flood defences within the area.

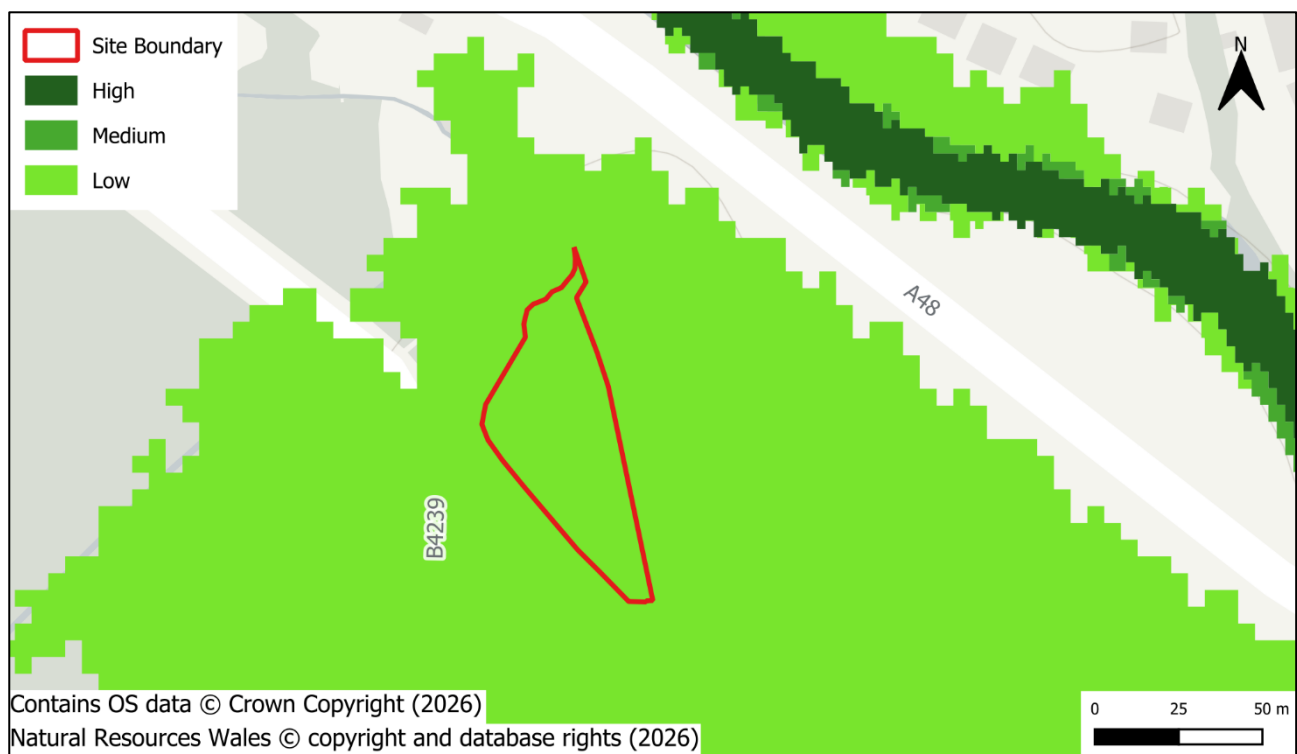


Figure 5 – NRW Flood Risk from Sea



The site is located within fluvial Flood Zone 3. Moreover, the NRW Flood Risk Assessment Wales (FRAW) mapping (Tidal/Coastal) indicates that the site is located within an area of low risk from rivers (**Figure 6**). This mapping takes into consideration flood defences within the area.

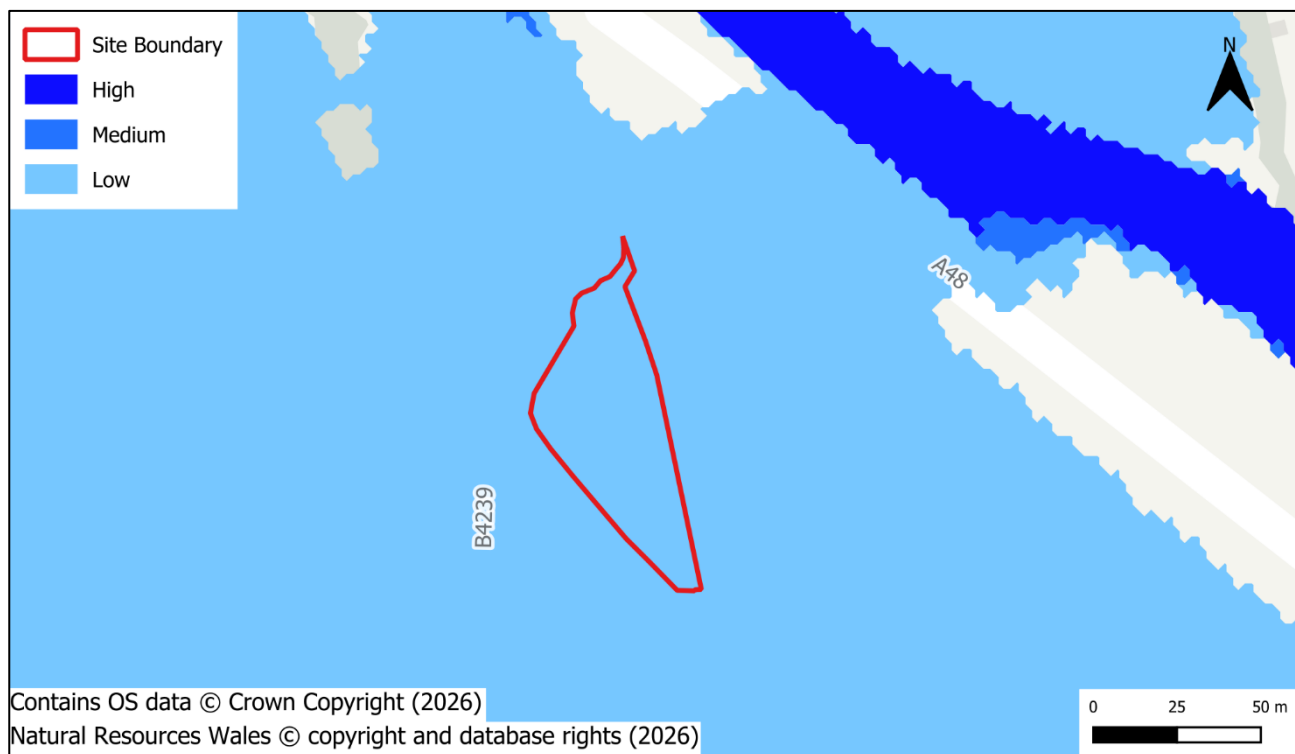


Figure 6 – NRW Flood Risk from Rivers

Flood Defences

The nearest flood defences to the site are located along the southwestern bank of the River Ebbw, approximately 59.5m northeast of the site. From interrogation of the available flood defence data, this is identified to comprise a wall that has a Standard of Protection (SoP) up to a 1 in 100 year flooding event (1% AEP).

Moreover, the site is located within a designated NRW TAN15 Defended Zone for both rivers and sea.

According to the NCC LDP (2011-2026), the Eastern Valleys Catchment Flood Management Plan (CFMP) provides a strategic framework for managing flood risk within the River Ebbw corridor and Wentlooge Levels, including Newport. It supports planning decisions and identifies policies to maintain and manage existing flood risk levels. The plan is implemented alongside the SFCA through collaboration with Natural Resources Wales and neighbouring Lead Local Flood Authorities.

NRW Flood Model Data

To help inform this report, Vale Consultancy has obtained Product 5 and 6 flood model data from NRW. Flood risk for the site has been assessed using both the **Newport_5_V8.0_2022** and **CaldicotAndWentlooge_5_V1.0_2016** models.

The assessment specifically considers fluvial flood risk arising from the River Ebbw and tidal flood risk associated with the Severn Estuary and wider floodplain. The site is located within an area influenced by the defended floodplain associated with the River Ebbw and Severn Estuary system; therefore, both defended flood scenarios and flood defence breach scenarios have been assessed.



The 2022 Newport model has been adopted as the primary source for present day (2021) and climate change (75 year - 2096 and 100 year - 2121) flood extents due to its updated topography, as-built flood defence surveys (including Crindau Pill), updated tidal and fluvial inflows, and high-resolution hydrodynamic simulations.

Moreover, the flood extents used within the Newport (2022) hydraulic model are taken from the defended scenario. Within this model there are present day return periods from the 1 in 5 year event up to and including the 1 in 1000 year event. Additionally, the model includes climate change scenarios within the assessment. These incorporate the most up-to-date climate change allowances effective from the 1st of April 2026 and have been applied to both fluvial (River Ebbw) and tidal extreme flood events, including the modelled 1 in 30, 1 in 200 and 1 in 1000 year extreme event. Where tidal flooding is concerned, the data used is the latest held by NRW.

However, the Newport 2022 model does not include breach scenarios of defended watercourses. To ensure high-consequence, low-probability events are captured, breach scenarios from the 2016 Caldicot and Wentlooge model are incorporated into the consequence assessment. Where applicable, the most conservative flood depths and extents from either model have been adopted to ensure a robust and compliant assessment of flood risk. It should be noted that both models incorporate fluvial flows from the River Ebbw alongside tidal influences, and therefore provide the basis for assessing both fluvial and tidal flood risk to the site under defended conditions.

Figure 7 represents the maximum modelled flood extents at the present-day events (2021) and **Figures 8** and **9** represent the maximum modelled flood extents for the two future climate change scenarios (2096 and 2121).

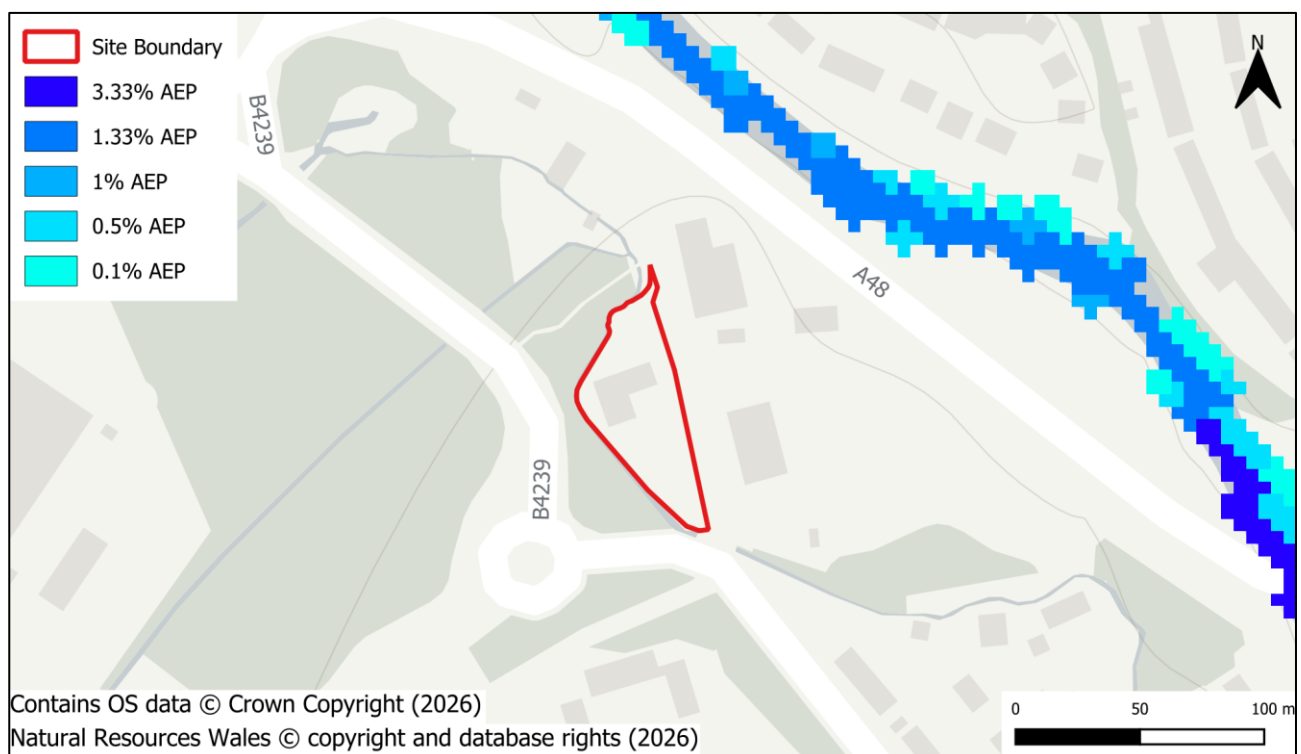


Figure 7: *Modelled Flood Extents for Present Day (2021)*

As seen in **Figure 7**, the site is shown to not be at risk of flooding for all present-day return periods, up to and including the extreme 1 in 1000 year (0.1% AEP) event. The site is located approximately 71m southwest of the nearest modelled extent.

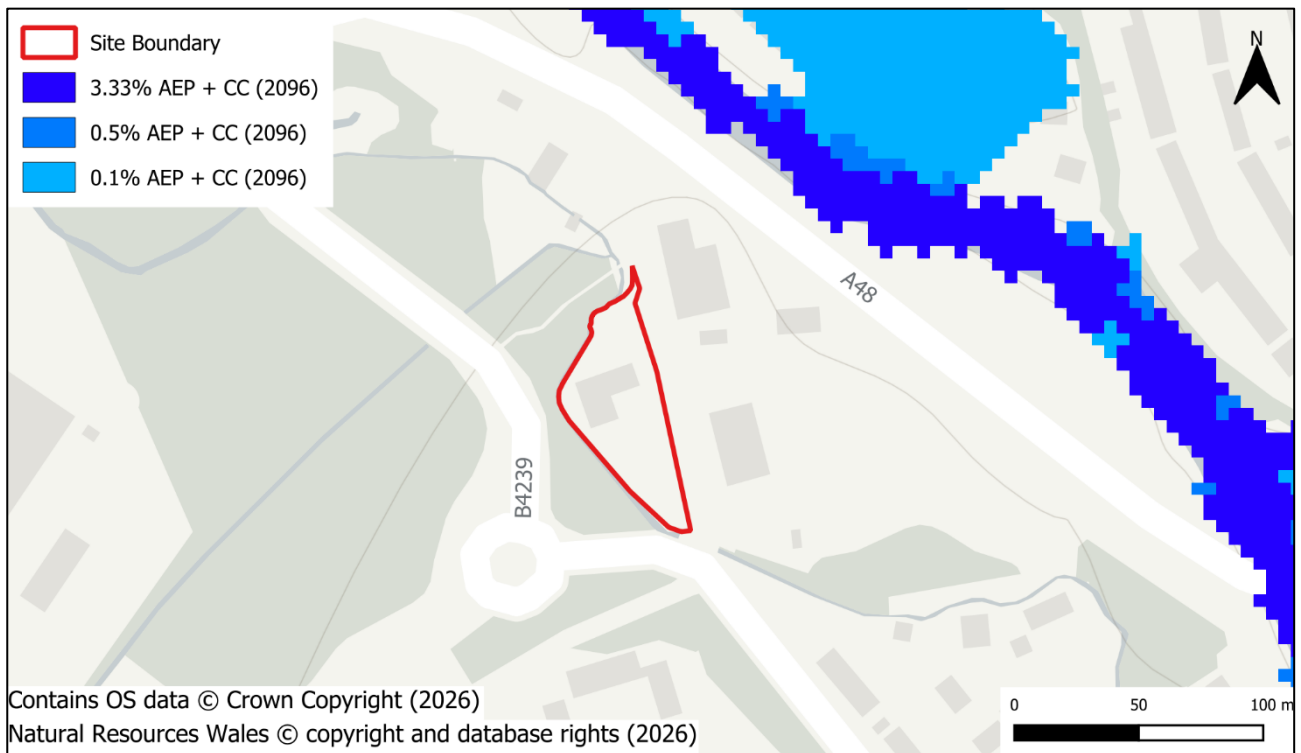


Figure 8: *Modelled Flood Extents for the Future CC Events - 2096*

As seen in **Figure 8**, the site is shown to not be at risk across all future CC return periods up to and including the extreme 0.1% AEP event for the year 2096. The site is located approximately 82m southwest of the nearest modelled extent. These results are derived solely from the Newport_5_V8.0_2022 hydraulic model climate change outputs.

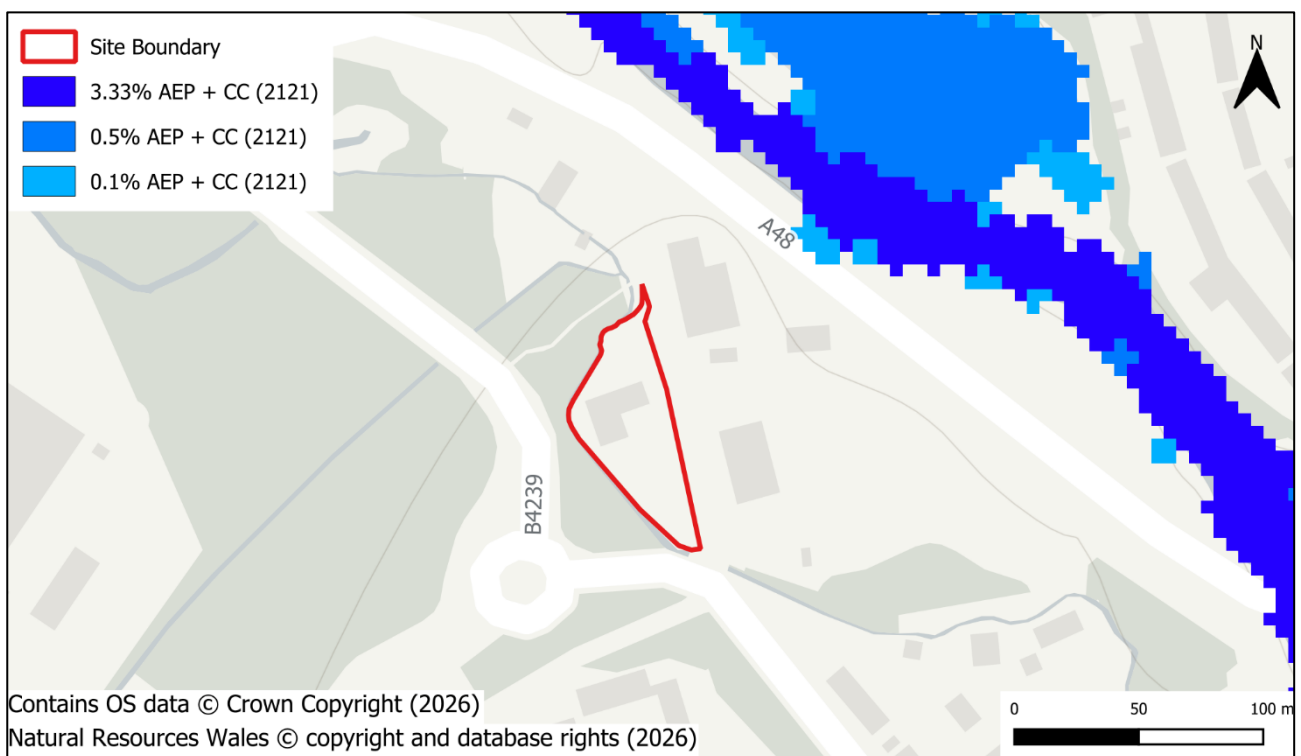


Figure 9: *Modelled Flood Extents for the Future CC Events - 2121*

As seen in **Figure 9**, the site is shown to not be at risk in all future CC return periods up to and including the 0.1% AEP event for the year 2121. The site is located approximately 63m southwest of the nearest



modelled extent. These results are derived solely from the Newport_5_V8.0_2022 hydraulic model climate change outputs and represent the maximum flood extents for the site under future tidal and fluvial scenarios.

In addition, as previously mentioned, the Newport 2022 model does not include breach scenarios of defended watercourses. To ensure high-consequence, low-probability events are captured, breach scenarios from the 2016 Caldicot and Wentlooge model are incorporated into the consequence assessment. This analysis was carried out by HR Wallingford using the EMBREA (Embankment Breach) model to simulate the breaching process for various embankments represented within the Caldicot and Wentlooge model. The breach assessment has been reviewed to identify residual flood risk arising from both fluvial and tidal flood mechanisms affecting the site.

Following correspondence with NRW (ref: CAS-308197-N3C5) and given the presence of flood defences associated with the River Ebbw and wider floodplain, the modelled 0.1% AEP + CC breach event has been reviewed as the design event for assessing residual fluvial flood risk.

Based on a review of the breach modelling results, the site is shown to not be at risk of flooding across all assessed breach scenarios. The site is located approximately 90m southwest of the nearest modelled extent as shown in **Figure 10**.

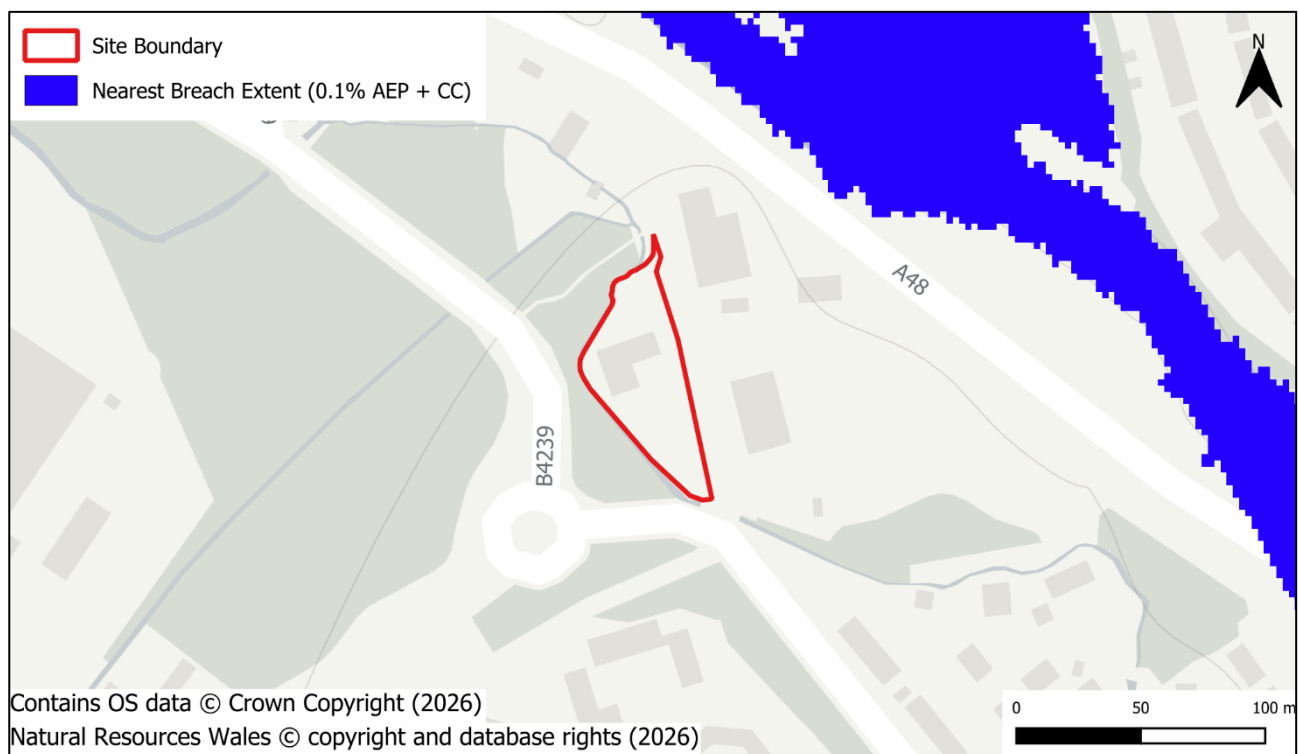


Figure 10: Nearest Modelled Breach Scenario – (Caldicot and Wentlooge model 2016)

Based on a review of all the analysis above, the site is shown to not be at risk of flooding across all assessed present day, climate change and breach scenarios for all return periods.

Overall, based on the analysis conducted within this section, the site is considered to be at a **Low** risk of flooding from tidal and fluvial sources. Further considerations are made within Section 5 in relation to keeping this risk to a low designation in the long-term.

4.3 Surface Water & Small Watercourses (Pluvial)



The southeastern boundary of the site is marginally encroached by a localised area of Flood Zone 2, with the remainder of the site being located within Flood Zone 1. Moreover, the NRW Risk of Flooding from Surface Water and Small Watercourses mapping (**Figure 11**) also indicates the southeastern boundary of the site to be marginally encroached by a localised area of low probability of surface water flooding, corresponding with an area of lower topography. The proposed classroom is shown to not be at risk across all probability events, alongside the remainder of the site.

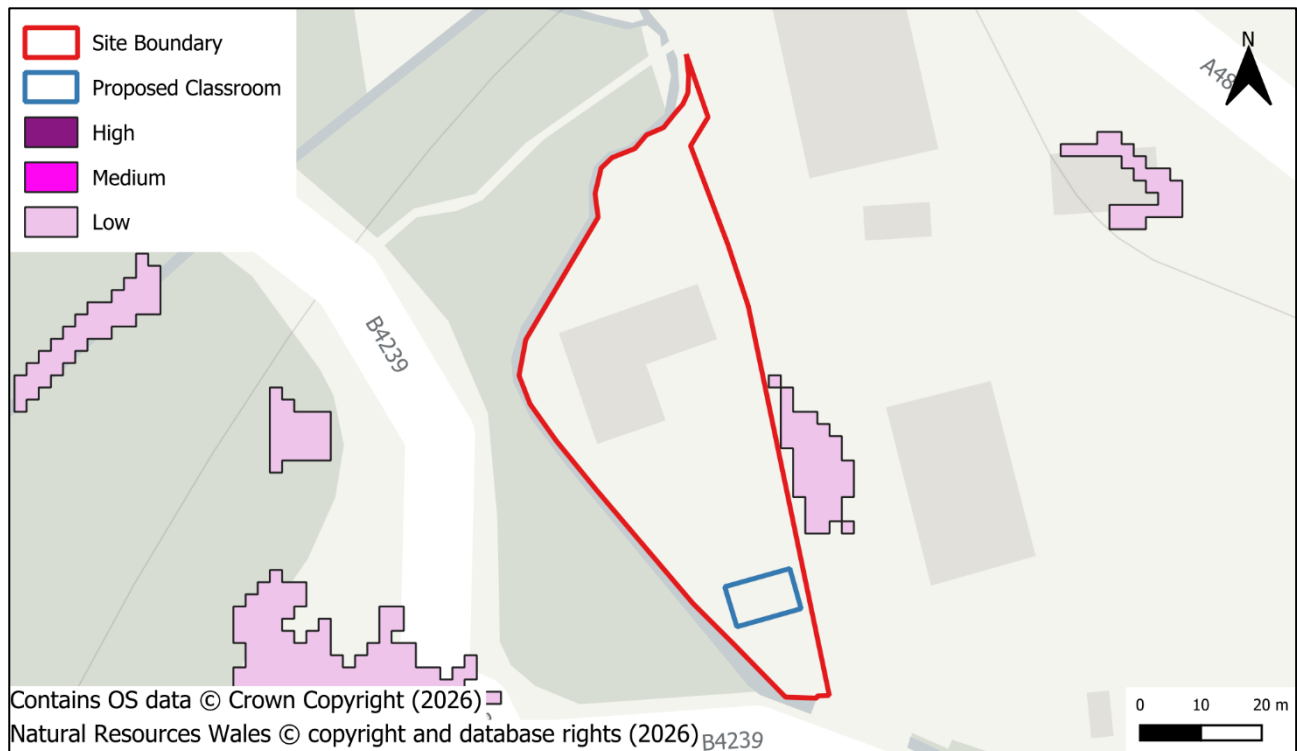


Figure 11 – NRW Risk of Flooding from Surface Water and Small Watercourses

The probability definitions can be seen below for reference:

- **High probability** – each year, this area has a chance of flooding of greater than 1 in 30 (3.3%);
- **Medium probability** – each year, this area has a chance of flooding of between 1 in 100 (1%) and 1 in 30 (3.3%); and,
- **Low probability** – each year, the area has a chance of flooding of between 1 in 1000 (0.1%) and 1 in 100 (1%).

During the low probability event (**Figure 12**) the southeastern boundary of the site is shown to be marginally encroached by a small, localised area of surface water flooding with depths ranging between 0.15-0.3m, corresponding with an area of lower topography. It must be noted that the area of projected risk poses no risk to the building footprints and is predominately located within the adjacent Lighthouse Road. Moreover, the proposed classroom is shown to not be at risk of surface water flooding.

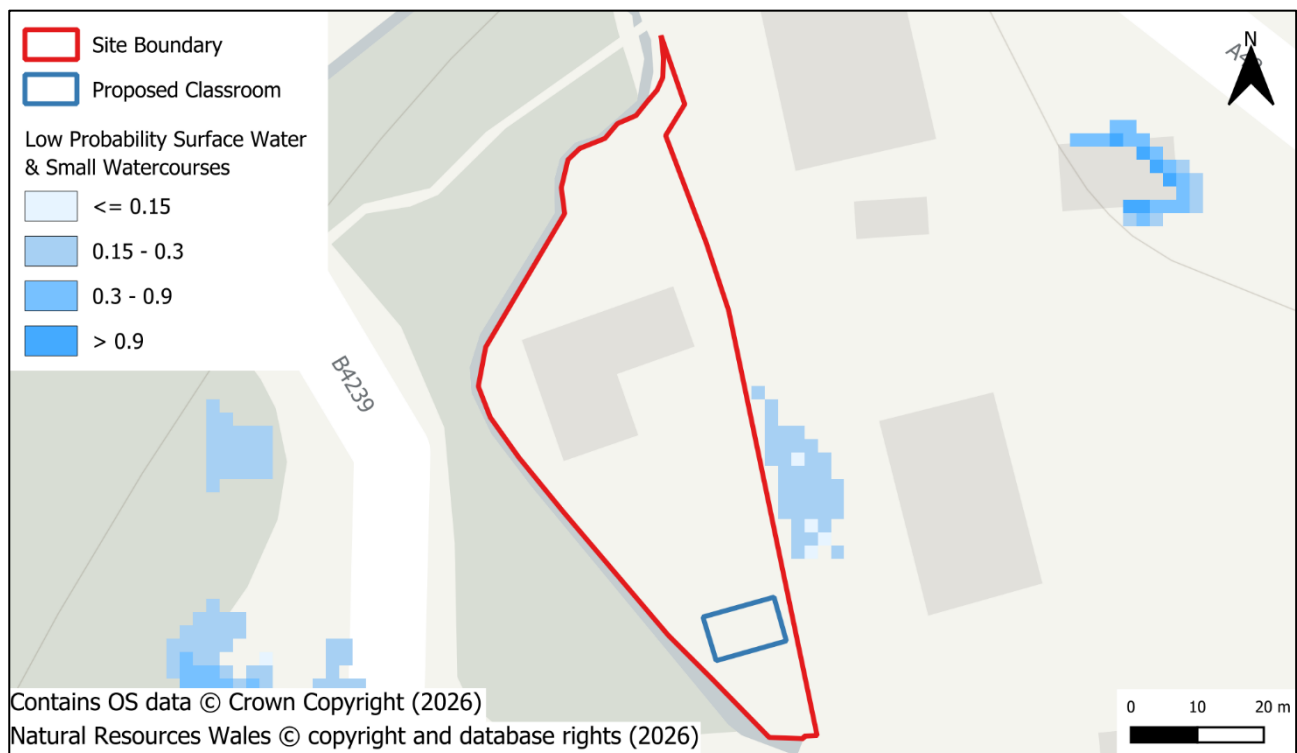


Figure 12 – NRW Low Probability Surface Water Depths

The projected surface water flooding is shown to be localised and align with wider topography. A review of the available LiDAR indicates that ground levels decrease away from the site to the east, with a low area located at Lighthouse Road in the region of the projected pooling; however, this does not obstruct the access point location.

Overall, based on the surface water mapping assessed above, the site is considered to be at a **Low** risk of flooding from pluvial sources. Further considerations are made within Section 5 in relation to keeping this risk to a low designation in the long-term.

4.4 Groundwater Flooding

Groundwater flooding occurs when water levels underneath the ground rise above normal levels. Prolonged heavy rainfall soaks into the ground and can cause the ground to become saturated. This results in rising groundwater levels which leads to flooding above ground.

Groundwater as a sole flooding mechanism is often regarded as low risk as it often relies on a coinciding rainfall, or flood event from an additional source to become a flood risk. The main contributory factor that will enhance the risk of groundwater flooding, is prolonged periods of high rainfall, which results in the groundwater saturation levels rising to the point where it reaches the surface.

Upon review of the relevant documents outlined in Section 1.3 of this report, there have been no reportable instances of historic groundwater flooding at or within the vicinity of the site. Moreover, according to the NCC LFRMS (2024-2030), it was indicated that groundwater is not considered to be a significant flood risk on a strategic scale in Newport. Groundwater is considered to rise and fall relatively slowly, and the local geology is not considered to yield significant volumes of groundwater.

Overall, the site is considered to be at a **Low** risk of groundwater flooding. No further consideration is deemed necessary as part of this report.



4.5 Artificial Sources

Flood risk from artificial sources would include the failure of man-made drainage or water supply network. Although the likelihood of such an occurrence is highly unpredictable, it is recommended that any proposed designs for the site take into account the location of any existing below ground services, in order to avoid any inadvertent flooding taking place during the construction phase and in the future.

According to the NCC LFRMS (2024-2030), CWW maintains a register of historical property sewer flooding events; however, upon review of the relevant online documents discussed in Section 1.3 of this report, it was indicated that there have been no reportable instances of historic sewer flooding located at or within the vicinity of the site.

Overall, the site is considered to be at a **Low** risk of flooding from artificial sources. No further consideration is deemed necessary as part of this report.

4.6 Reservoir Failure

Assessment of risk of a reservoir failure may be interpreted as the extent of flooding that would occur, should any reservoir that has a capacity larger than 25,000m³, suffer a catastrophic failure. Mapping of this nature is described by Natural Resources Wales as a very worst-case scenario, with a flood event of this type being extremely unlikely to occur.

The NRW Risk of Flooding from Reservoirs map (**Figure 13**) shows that the site is at risk of flooding from reservoirs. The risk of flooding from reservoirs is extremely unlikely to happen. For instance, all large reservoirs must be inspected and supervised by a reservoir panel engineer, as the enforcement agency the NRW ensure that reservoirs are inspected regularly, and essential safety / maintenance work is carried out.

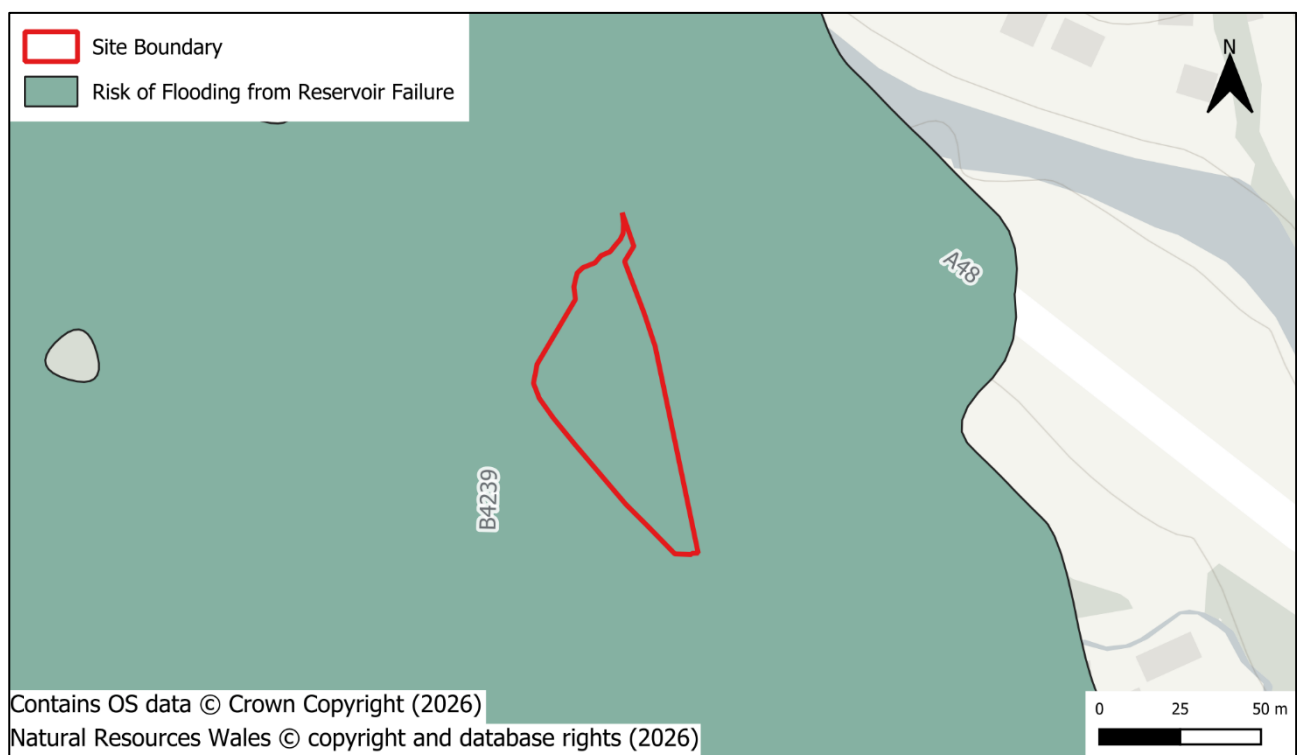


Figure 13 – NRW Risk of Flooding from Reservoir Failure

Current legislation states that all reservoirs are inspected regularly and the likelihood of failure occurring is considered to be low. Therefore, the site is at a **Low** risk of flooding from reservoir failure. Further considerations are made within Section 5 to help mitigate against this identified risk in the long-term.



5 FLOOD RISK MITIGATION

This report has so far evaluated all potential flood risk sources that may affect the site. The following sections describe the identified flood risks in the context of the proposed development and provide recommendations, where required, for the mitigation or reduction of those risks to enable safe development and comply with local and national guidance.

5.1 Design Flood Event

Planning Policy Wales and TAN15 guidance identifies that new developments should be designed to provide adequate flood risk management, mitigation, and resilience against the 'design flood' for their lifetime. Based on government guidance and following correspondence with NRW in May 2026 (ref: CAS-308197-N3C5), the development should be designed to be flood free during the extreme 0.1% AEP + CC tidal/fluviat event (Newport model 2022) and the breach design flood scenario (Caldicot and Wentlooge model 2016).

The site is protected by flood defences up to and including the 1% AEP flood event and therefore follows the guidance. Figure 6 of TAN 15 states that within the extreme 0.1% CC flood event, development would be expected to flood up to tolerable limits (600mm). A review of the Newport model (2022) and the Caldicot and Wentlooge model (2016) shows the site to not be at risk of flooding across all assessed present day, climate change and breach scenarios for all return periods including the extreme 0.1% AEP + CC (2121) combined event and the breach design flood scenario. Therefore, the development is deemed acceptable.

5.2 Acceptability of Flood Consequences

In accordance with Figure 2 and Paragraph 11.4 of TAN15 and following correspondence with NRW in May 2026 (ref: CAS-308197-N3C5), developers must ensure that there is no increase in flooding elsewhere.

An assessment of the proposed development indicates that there will be no increase in flood risk to third parties or to land elsewhere. The scheme comprises a Highly Vulnerable use that aligns with the existing and wider site uses and therefore does not represent an increase in vulnerability classification. Moreover, the whole site is shown to not be at risk across all assessed present day, climate change and breach scenarios for all return periods, including the extreme 0.1% AEP + CC (2121) combined event and the corresponding breach design flood scenario.

Taking all factors into account, the development complies with TAN 15 requirements by avoiding any increase in flood risk beyond the site boundary and ensuring resilience and recoverability over its lifetime. The potential flood consequences are therefore considered acceptable and manageable, including with allowance for climate change, and the developer accepts the associated risks. The proposal is consequently justified in flood risk terms and accords with national planning policy in Wales.

5.3 Design Principles for Development

It is recommended that, based on the current design proposals, the following design principles should be incorporated to demonstrate its long-term resilience to flood risk in the future.

Below are a series of recommendations which could be considered to demonstrate the long-term resilience of the site and ensure recoverability in the event of flooding. Property Flood Resilience (PFR) measures are recommended along all external elevations (up to 0.3m) and internally of the building footprint. This includes measures such as:

- **Floor Finish:** The floor finish on the ground floor should be kept as flood resilient as possible (resin/ceramic/concrete tiles as opposed to lino/vinyl/carpet) so the floor can be easily cleaned down following any future flooding.



- **Critical Infrastructure/Electrical Sockets:** Raise all electronic control units and sockets (0.3m) above external ground levels to mitigate against any future flooding.
- **Drainage Systems:** Routinely maintained, inspected and cleared (ensuring it is performing to optimal capacity).
- **Duct Sealing:** Seal all cables and pipes entries up to 0.3m with duct sealing.
- **Non-Return Valves (NRV):** NRVs could be installed to all drainage outlets to mitigate against future risk of the local drainage network surcharging.
- **Airbricks:** Utilise self-closing airbricks where possible

These mitigation measures should be applied as far as is practically possible.

Flood Awareness

The site is located within two Flood Alert Areas (Rivers Ebbw, Sirhowy and Lwyd - ref: 103WAFebbw and Coast from Aberthaw to Severn Bridge – ref: 103WACcoastse) (**Figure 14**), and a Flood Warning Area (Coast at the Wentlooge Levels in the Newport Area - ref: 103FWCt04). The site owner and occupants should register¹ to receive both Flood Alerts and Warnings.

Flood Warnings Direct is a free service that provides prior warnings of a fluvial / tidal flood event. Areas at risk of flooding from rivers (fluvial) and the sea (tidal) are warned, which relies on direct measurements of rainfall, river levels, tide levels, in-house predictive models, rainfall data and information from the Met Office. This service operates 24 hours / day 365 days a year. If flooding is forecast, warnings are issued using a set of easily recognisable codes.

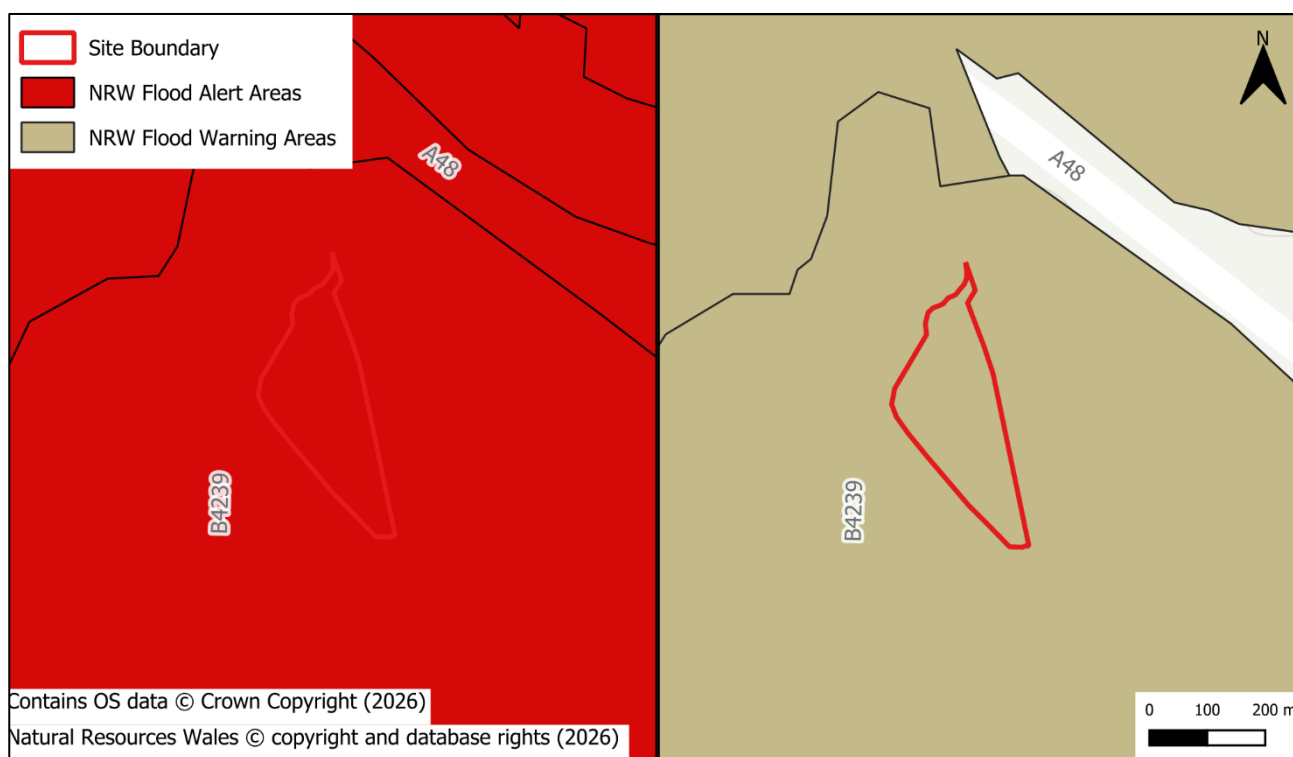


Figure 14 – NRW Flood Alert and Warning Areas

Appropriate documentation should be displayed to inform any users of the site of the potential flood risk. Documentation will be displayed at an appropriate position. The documentation will indicate the risk of flooding and contain information on how prior warnings will be sent. Further information on the documentation will comprise of the Floodline Warnings Direct telephone number, emergency services numbers and exit plans and egress directions, as identified in the evacuation procedure for the site.

¹ [Natural Resources Wales / Sign up to receive flood warnings](#)



The site owner should undertake a Flood Evacuation Management Plan (FEMP) for implementation during an extreme event. This should be done in conjunction with the appropriate professional bodies including and in particular NCC Emergency Planning Department. The FEMP would be a written document which should outline the course of action to all occupants/users/employees/students during a flood. The evacuation procedure should address (but not be limited to) the following topics:

- A list of important contacts, building services, suppliers and evacuation contacts for officers and users;
- A description or plan showing locations of key property, protective materials and service shut-off points;
- Basic strategies for protecting property and assisting recovery;
- Checklist of procedures that can be quickly accessed by users during a flood;
- Safe exit-plan;
- Safe exit route to higher ground outside the flood risk area (building and site), kept and displayed on site.

Access/Egress

Provision of safe access/egress is provided from the site via the adjacent Lighthouse Road to the adjoining A48 to the northeast, continuing in a north westerly direction for approximately 226m before joining the B4237 road. The route then proceeds eastward for approximately 100m, leading beyond the extents of Flood Zones 2 and 3 and all modelled flood extents.



6 CONCLUSION

Vale Consultancy were commissioned by Acorn Nurseries to undertake a FCA in support of a planning application (Ref: 25/1088) for the proposed development at Acorn Nurseries, Alma House, Lighthouse Road, Duffryn, NP10 8TG.

The risk of flooding to the site from all sources is considered Low. The site is located within tidal/fluviat Flood Zone 3 and as part of this assessment the available NRW flood model data was reviewed. Analysis indicates that the entire site is shown to be flood free across all assessed present day, climate change and breach scenarios for all return periods including the extreme 0.1% AEP + CC (2121) combined event and the corresponding breach design flood scenario.

In accordance with TAN15 Section 11, the proposed development has been assessed against the acceptability of consequences criteria. An assessment of the proposed development indicates that there will be no increase in flood risk to third parties or to land elsewhere. Additionally, the proposal comprises a Highly Vulnerable use that aligns with the existing use of the wider site and therefore does not represent an increase in vulnerability classification. Furthermore, the works present an opportunity to ensure the site is more resilient and resistant to flood risk and the potential impacts of climate change, in the future.

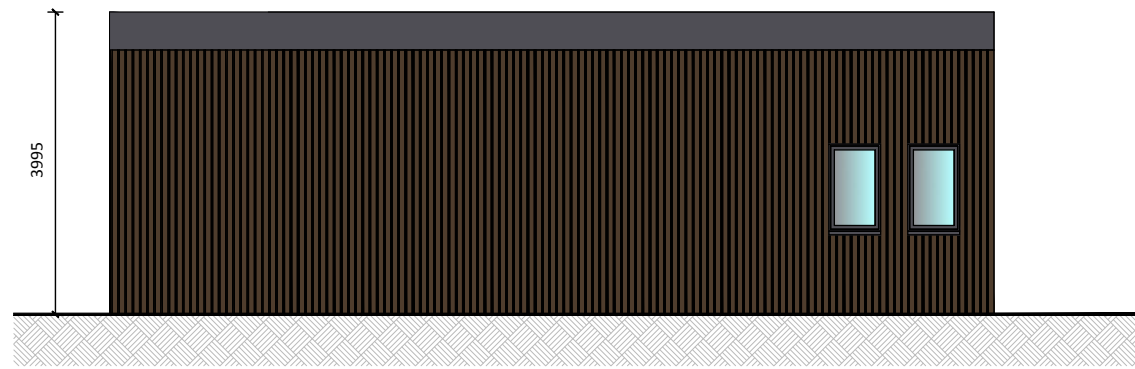
Taking these factors into account, the potential flood consequences are considered acceptable and manageable over the lifetime of the development, including allowance for climate change, with the developer fully accepting the associated risks. The proposal is therefore justified in flood risk terms, complies with TAN 15, and aligns with national planning policy in Wales.

This FCA has been prepared by suitably qualified personnel and is proportionate to the scale and nature of the proposed works. The assessment demonstrates that the proposed development is:

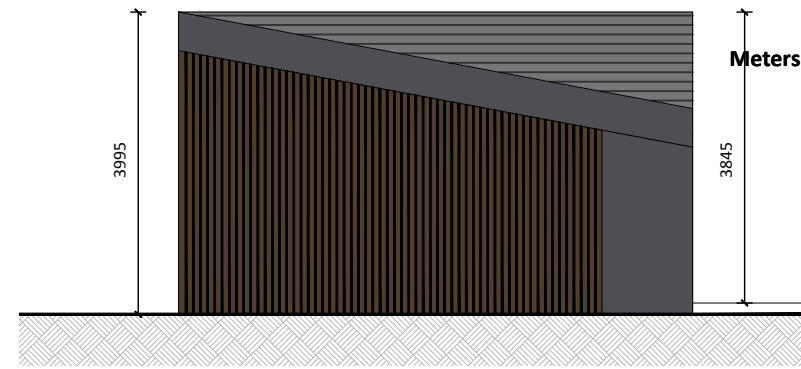
- Informed by an assessment of current and future flood risk, including climate change;
- Appropriate to its flood risk vulnerability classification;
- Unlikely to increase flood risk elsewhere; and
- Supported by mitigation measures, where necessary, to ensure the site and its occupants remain safe for the lifetime of the development.



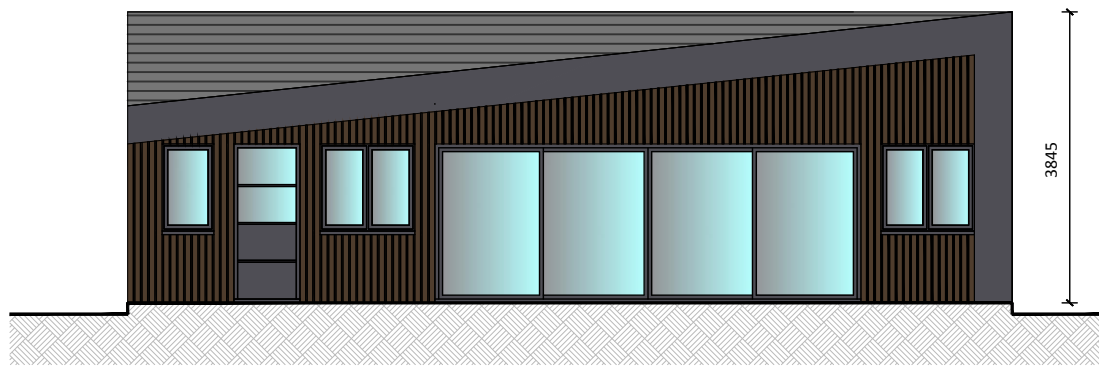
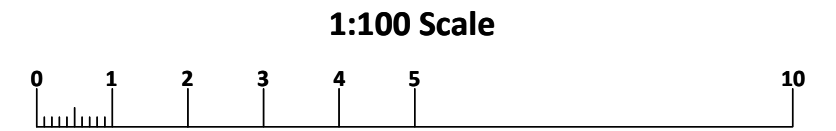
APPENDIX A:
Existing & Proposed Plans



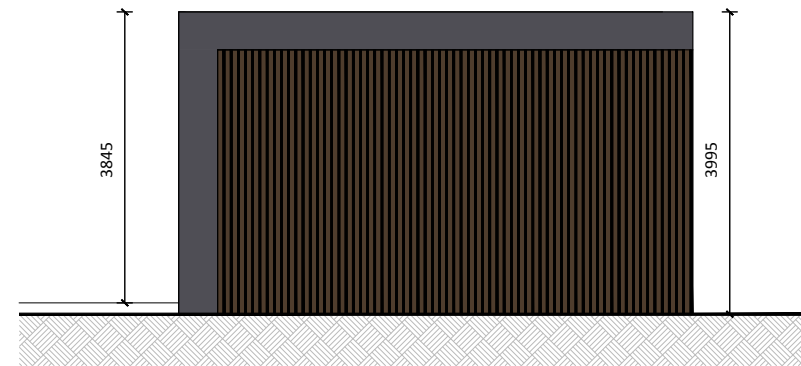
PROPOSED REAR ELEVATION



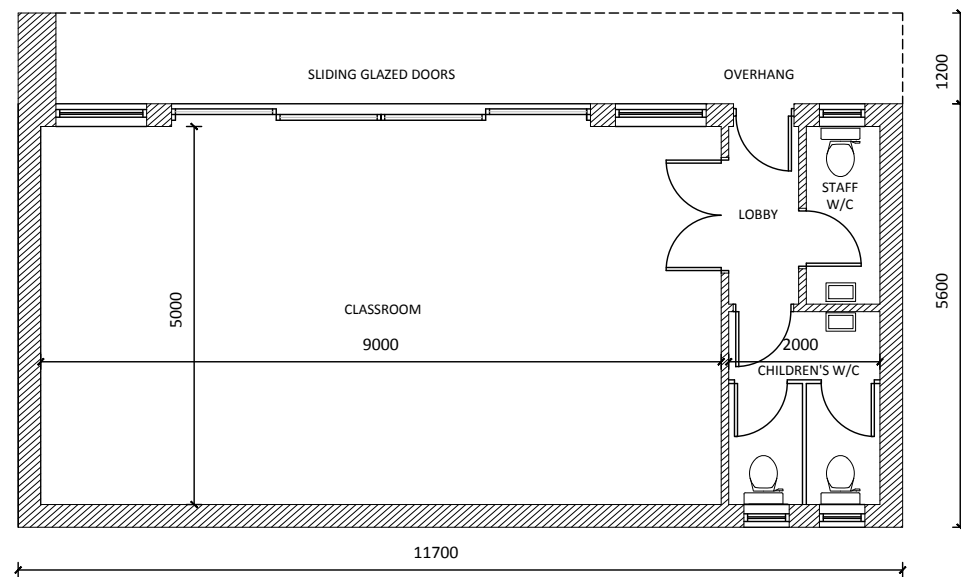
PROPOSED SIDE ELEVATION



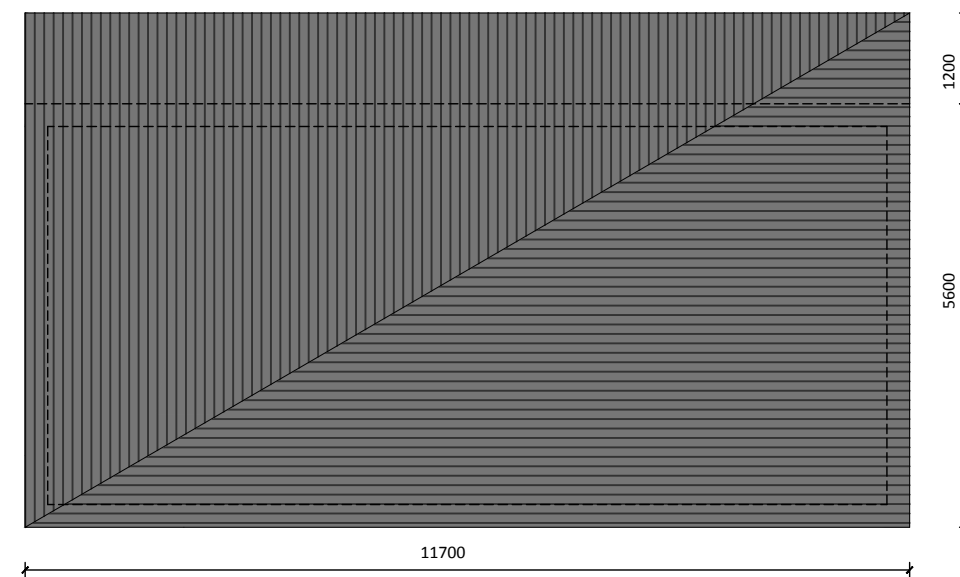
PROPOSED FRONT ELEVATION



PROPOSED SIDE ELEVATION



PROPOSED GROUND FLOOR PLAN



PROPOSED ROOF PLAN



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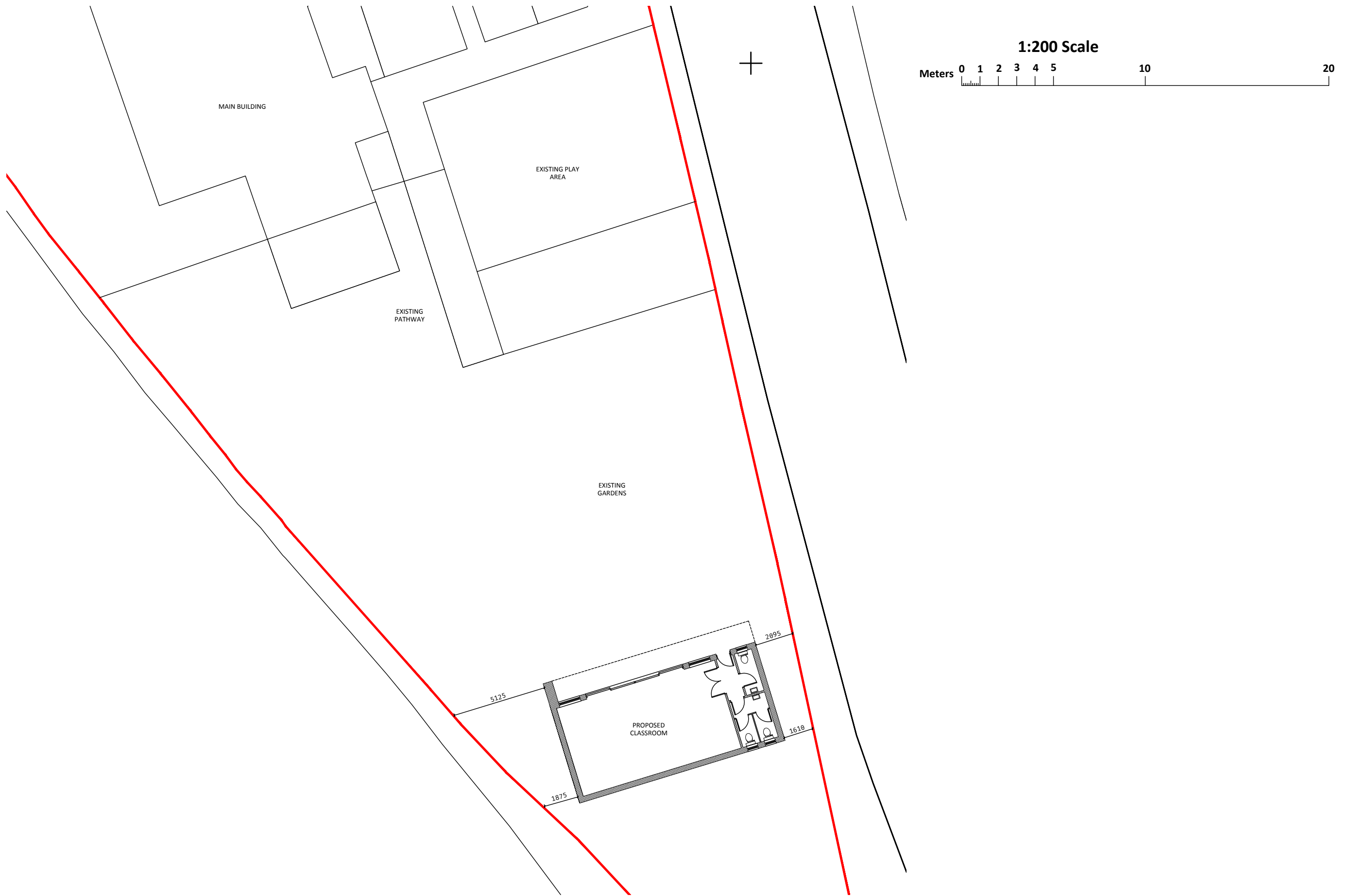
PROJECT:
ACORN NURSERIES, LIGHTHOUSE
ROAD, DUFFRYN, NP10 8TG
DRAWN BY: IRJ

DWG:
PROPOSED OUTDOOR CLASSROOM
-PLANS AND ELEVATIONS
SCALE: 1:100 @A3

CLIENT:
ACORN NURSERIES
ISSUE DATE: 04/11/25

DWG no:
25-PA147-01
REVISION: -





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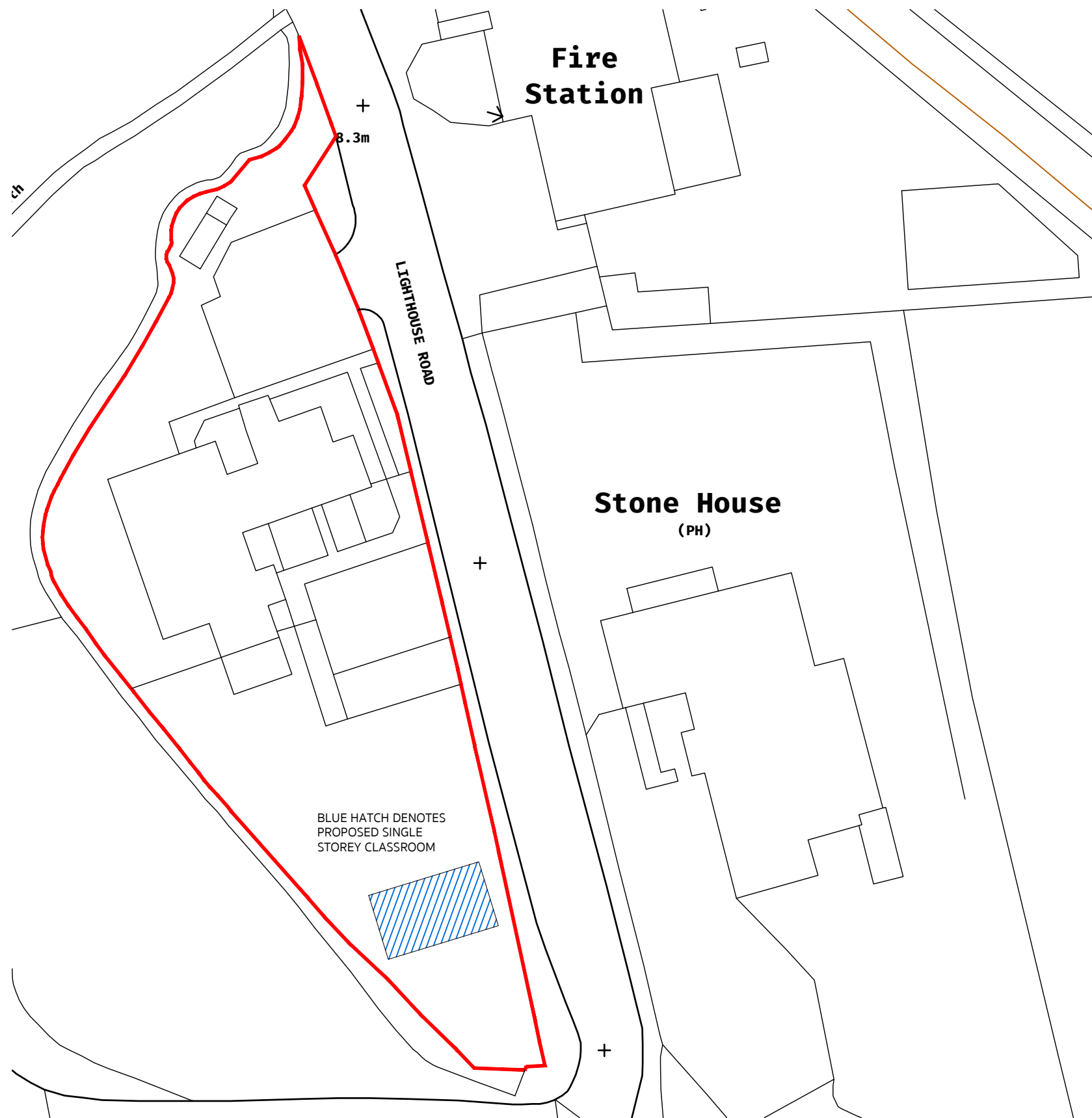
PROJECT:
ACORN NURSERIES, LIGHTHOUSE
ROAD, DUFFRYN, NP10 8TG
DRAWN BY: IRJ

DWG:
PROPOSED OUTDOOR CLASSROOM
-SITE PLAN
SCALE: 1:200 @A3

CLIENT:
ACORN NURSERIES
ISSUE DATE: 04/11/25

DWG no:
25-PA147-02
REVISION: -





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PROJECT:
ACORN NURSERIES, LIGHTHOUSE ROAD, DUFFRYN, NP10 8TG

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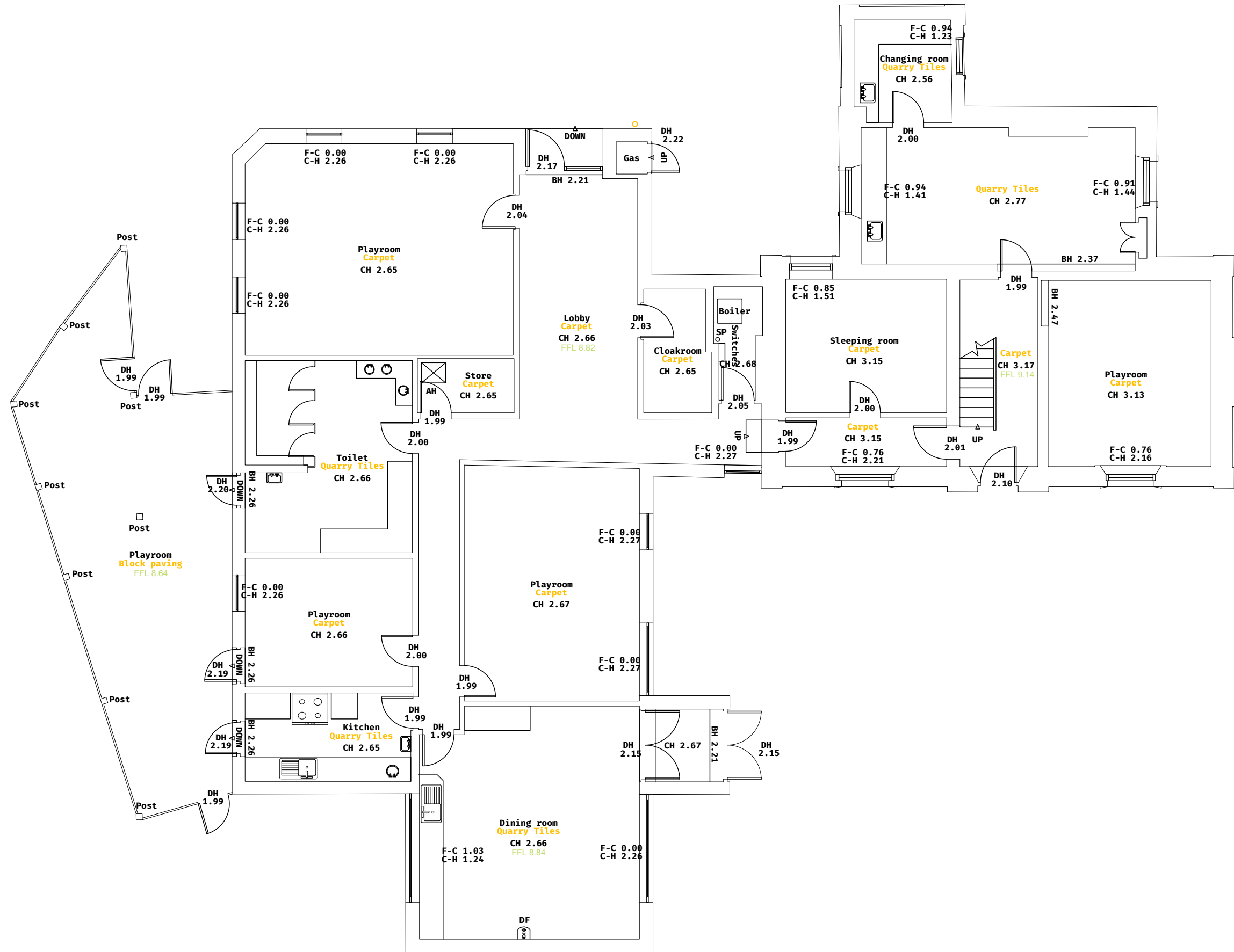
DWG:
PROPOSED OUTDOOR CLASSROOM BLOCK PLAN & SITE LOCATION PLAN

SCALE: 1:500 / 1:1250 @A3

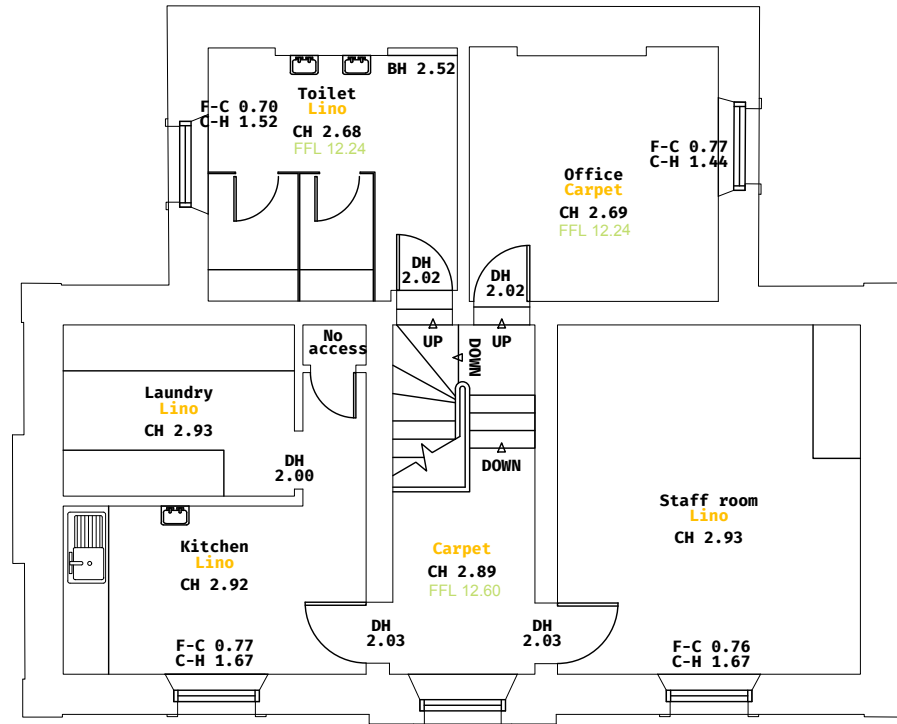
CLIENT:
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ISSUE DATE: 04/11/25

DWG no:
25-PA147-03
REVISION: -

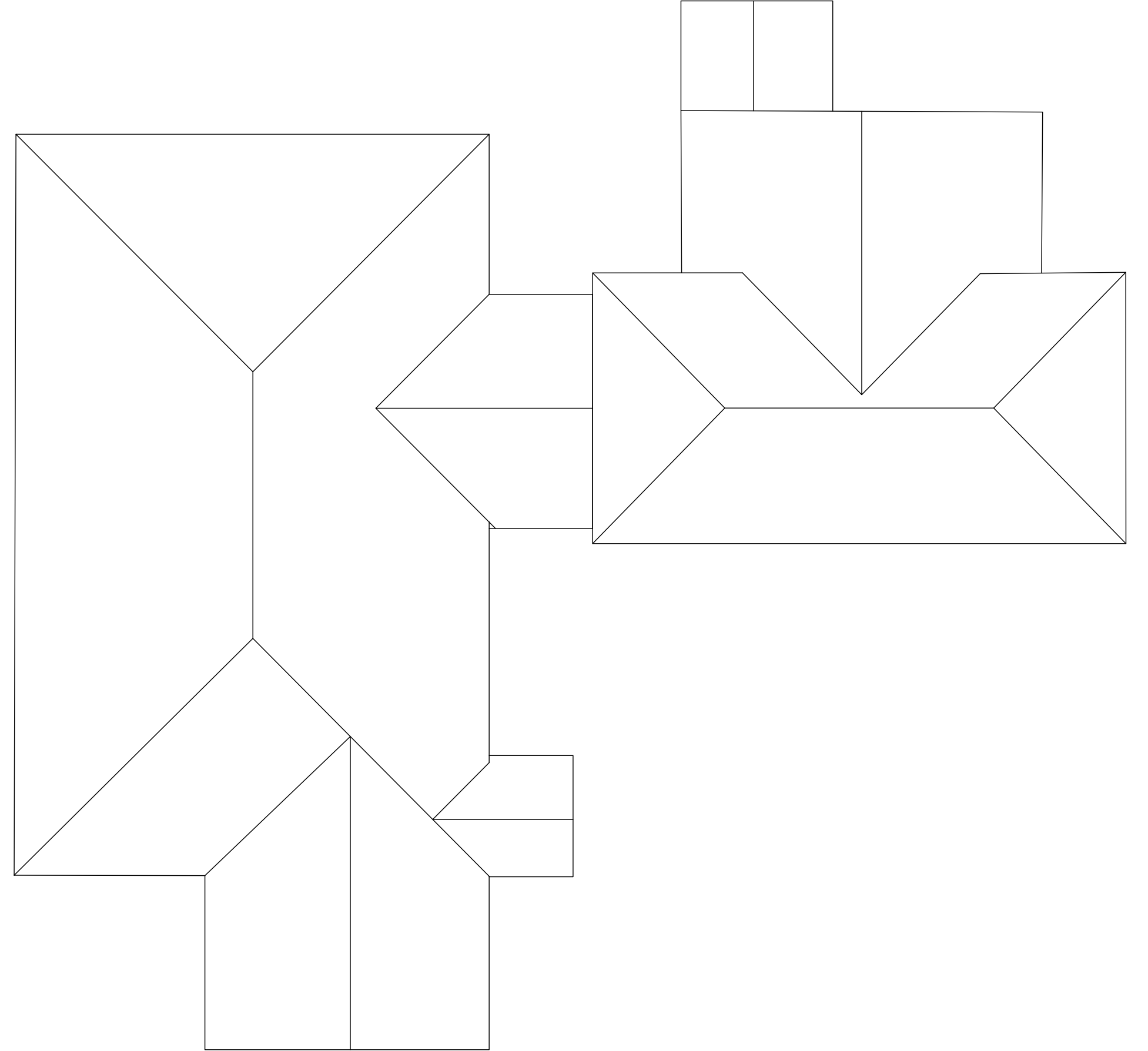




GROUND FLOOR PLAN



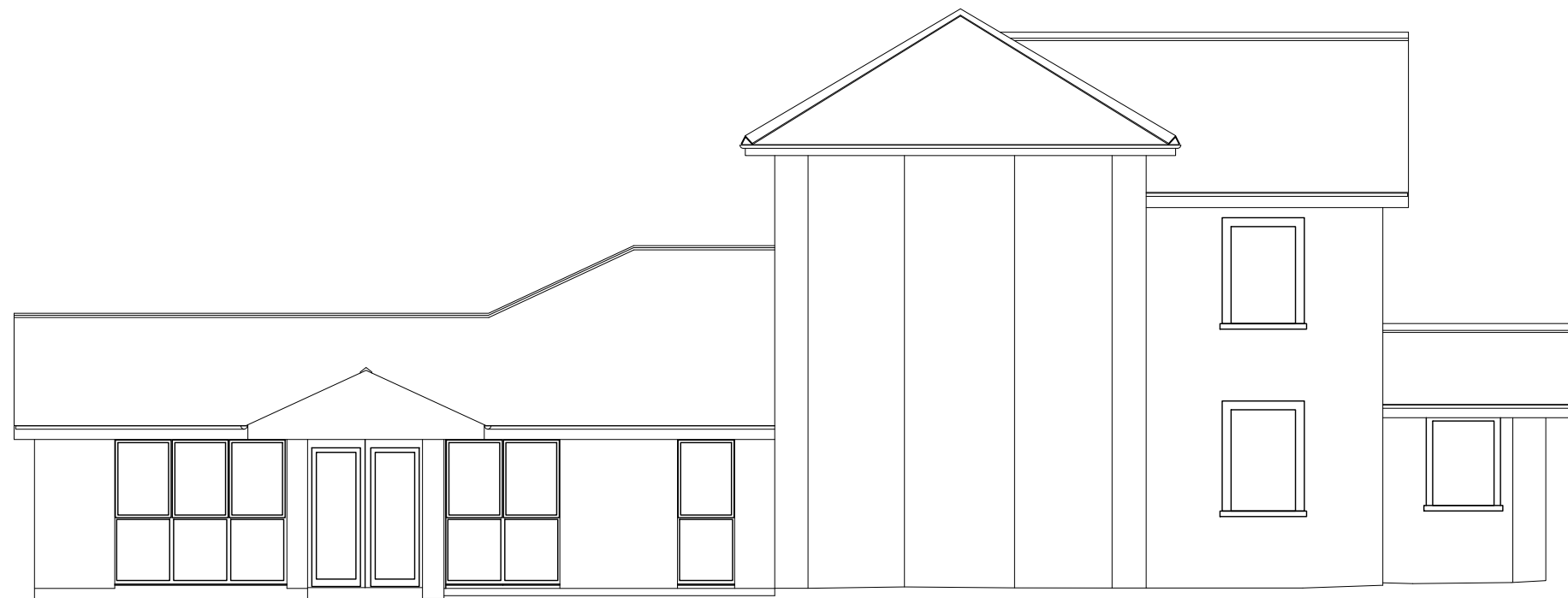
FIRST FLOOR PLAN



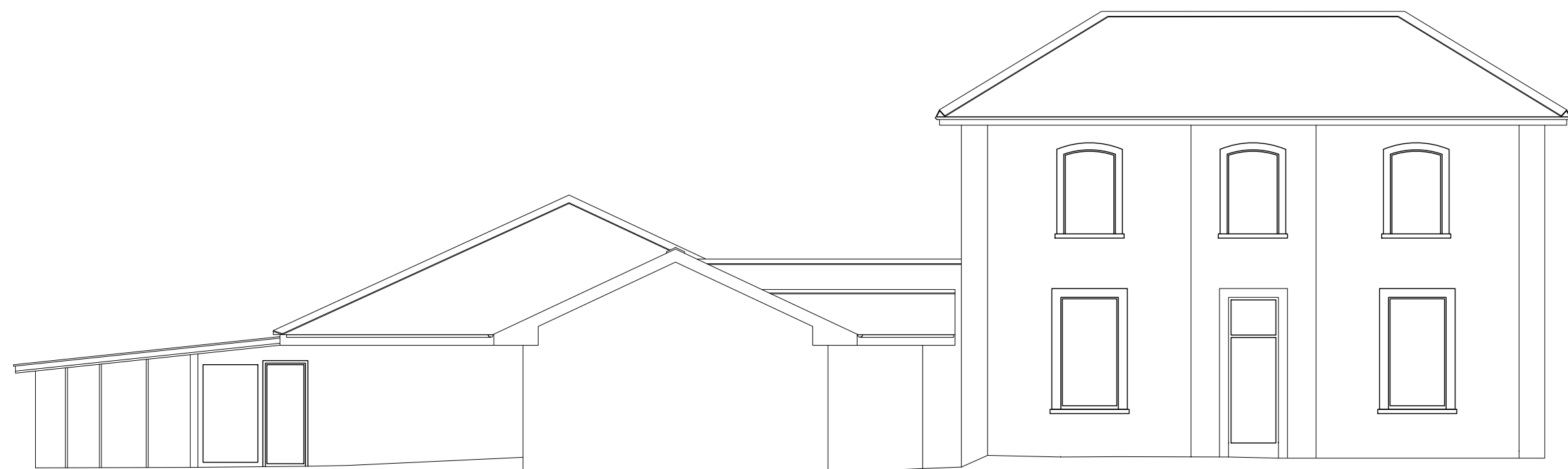
ROOF PLAN



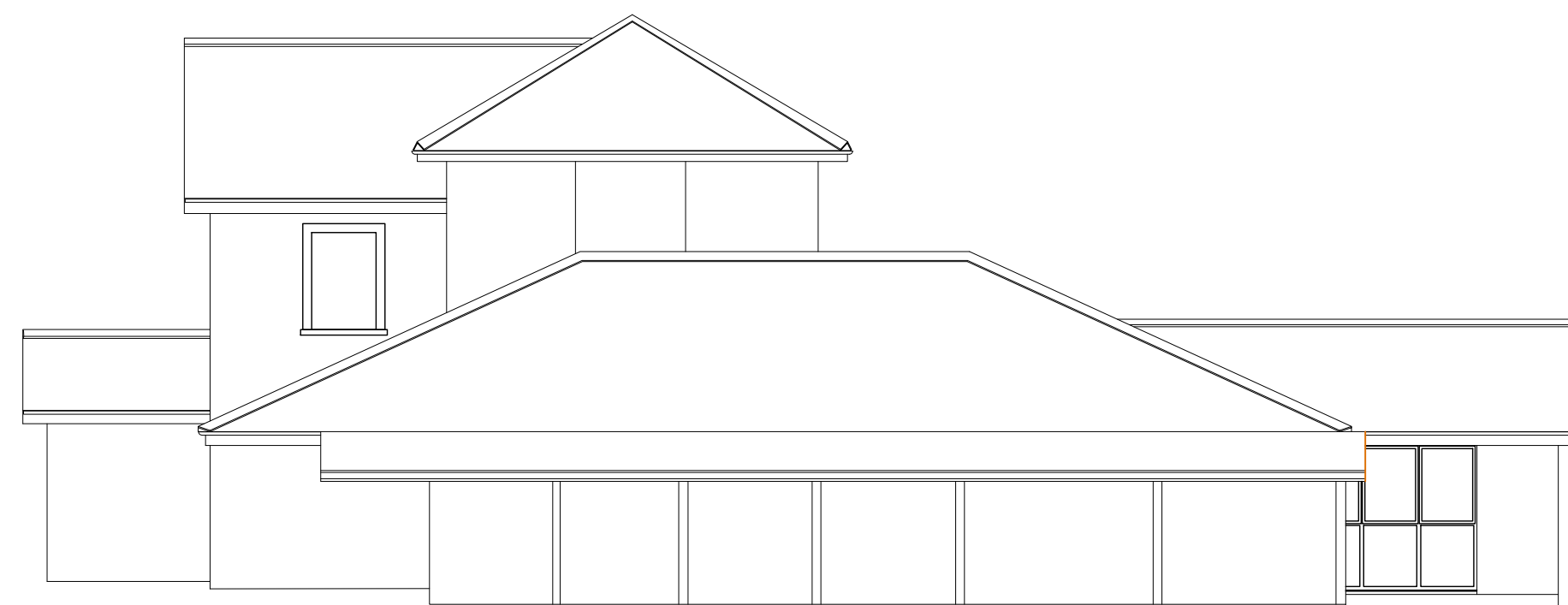
NORTH ELEVATION



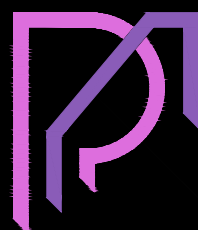
EAST ELEVATION



SOUTH ELEVATION



WEST ELEVATION



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REVISION:

PROJECT:
ACORN NURSERIES, LIGHTHOUSE
ROAD, DUFFRYN, NP10 8TG

DRAWN BY: IJR

DWG:
EXISTING FLOOR PLANS AND ELEVATIONS

SCALE: 1:100@A1

CLIENT:
ACORN NURSERIES

ISSUE DATE: 16/12/25

DWG no:
25-PA147-04

REVISION: -

