FLOOD CONSEQUENCE AND DRAINAGE ASSESSMENT FOR A PROPOSED COMMERCIAL / LIGHT INDUSTRIAL DEVELOPMENT, PROSPERITY PARC, HOLYHEAD, ANGLESEY

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Date: 29th November 2024

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Date: 29th November 2024

Reference	Issue	Issued by	Approved by	Issued Date

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APPENDICES

1.0 EXECUTIVE SUMMARY

1.1 General

1.1.1 This report forms part of an outline planning application which seeks consent for the re-development of the former aluminium works at Penrhos, Holyhead, Anglesey.

1.1.2 The site is located to the south of the A5 (London Road) and to the east of Penrhos Industrial Estate.

1.1.3 The site currently comprises redundant buildings, site roads and paving etc from the former industrial complex together with areas of vegetation, extending in area to approximately 87.9Ha.

1.2 Flood Risk

1.2.1 The application site is mostly situated in Flood Zone 1 (lowest risk of flooding). There is a small portion of the site close to the frontage with the A5 road shown to lie in Flood Zone 3 (high risk of flooding). However, no built development is proposed in that area which will be retained as part of the on-site green infrastructure and landscaping provision.

1.2.2 The area of Flood Zone 3 is shown to be prone to flooding from the sea.

1.2.3 The site is not shown to lie in an area which could be affected by reservoir flooding.

1.2.4 Flood risk mitigation measures will need to be incorporated in the design of the new development to address the risk from flooding.

1.2 Surface Water Disposal

1.2.1 There is a requirement within the Welsh Government's Planning Policy and Guidance: National Policy to provide a sustainable urban drainage system (SuDS) to mitigate flood risk and pollution posed by surface water run-off from the proposed development.

1.2.2 Various SuDS are available for consideration, the provision of which is to address the four pillars of SuDS. Constraints within the site, land availability, ground water levels and the site layout may be influencing factors for the design of an appropriate drainage system incorporating SuDS components.

1.2.3 The British Geological Survey map shows the local geology to compose superficial deposits of Till, Devensian – Diamicton overlaying bedrock comprising New Harbour Group – Mica, Schist and Psammite.

1.2.4 Ground conditions are therefore not suitable for infiltration as the method for disposal of the surface water run-off from the development.

1.2.5 The surface water run-off from the former industrial development discharged directly to Holyhead Bay at an unrestricted rate of discharge via twin 1800mm diameter pipes.

1.2.6 It is proposed that surface water run-off from the development will utilise the existing outfall.

1.2.7 On this basis there would be no requirement for any storage of surface water to be provided for the new development.

1.2.8 The surface water drainage design will need to include an allowance of 40% for climate change (more detail can be found within Section 7).

1.3 Foul Water Disposal

1.3.1 It is proposed that foul water run-off from the new development will be conveyed to the existing public sewer network and subsequently to the foul water pumping station, which is located in the Northwest of the development site.

1.4 Further Information

1.4.1 Details of the new buildings and infrastructure serving the development will be required to enable the surface water and foul water drainage designs to be undertaken.

1.4.2 The site will need to be developed with separate foul water and surface water drainage systems.

1.4.3 Details of any trade effluent disposal requirements, if relevant, will need to be established and agreement reached with Welsh Water regarding the disposal of any such effluent. However, at this outline planning stage end-users and occupiers, and the details of their activities, are not known or confirmed.

2.0 INTRODUCTION

2.1 Background

2.1.1 Alan Wood & Partners were commissioned by Anglesey Land Holdings Ltd to prepare a Flood Consequence and Drainage Assessment in support of an application for planning consent for a proposed employment (data centre led with office, and research and development) redevelopment of the site of the former aluminium works to the Southeast of Holyhead, Anglesey.

2.1.2 The application is in outline with matters, including layout and design, being reserved.

2.1.3 The project site is allocated for a range of employment uses in the adopted local development plan, and also lies within the proposed Anglesey Freeport development area. Planning consents have already been granted by Anglesey County Council for use of parts of the site to deliver a sub-station, and a battery storage facility (BESS), and demolition of many of the former industrial buildings has been approved and implemented.

2.1.4 A Flood Consequence and Drainage Assessment (FCDA) for the proposed redevelopment is required to assess the development's risk from flooding and the suitability of the site in terms of drainage.

2.2 Layout of Report

2.2.1 Section 1 provides an executive summary to the FCDA, summarising the key points of the report and also highlighting major points, describing any results, conclusions and recommendations from the report.

2.2.2 Section 2 provides an introduction to the FCDA, explains the layout of this FCDA and provides an introduction to flood risk and the latest guidance on development and flood risk in Wales.

2.2.3 Section 3 provides an introduction to the site. The site description is based upon a desktop study and information provided by the developer. In order to obtain further information on flood risk, consultation was undertaken with Natural Resources Wales via their website.

2.2.4 Section 4 of this report details the information gathered through the consultation.

2.2.5 Section 5 of this report details the development proposals.

2.2.6 Section 6 considers the foul water drainage arrangements for the proposed development.

2.2.7 Section 7 considers the surface water drainage arrangements for the proposed development.

2.2.8 Section 8 considers the operation and maintenance requirements for the drainage network serving the proposed development.

2.2.9 Section 9 of this report considers the flood risk to site, and the potential for the development proposals to impact on flood risk. The assessment of flood risk is based on the guidance within Technical Advice Note 15 (TAN 15) published by the Welsh Government and utilises all the information gathered in the preparation of the report.

2.2.10 Section 10 of this report provides details of any recommendations for further work to mitigate against possible flooding.

2.2.11 Section 11 provides a summary of the report.

3.0 EXISTING SITE DESCRIPTION

3.1 Location

3.1.1 The proposed development site is located to the north of the A55 North Wales Expressway, to the Southeast of Holyhead, Isle of Anglesey.

3.1.2 The development lies approximately 1.8km to the Southeast of Holyhead town centre and approximately 1.5km to the Northeast of the village of Trearddur.

3.1.3 An aerial photograph is included in Figure 1 below, which identifies the location of the site.

Figure 1: Aerial Photograph

3.1.4 The Ordnance Survey grid reference for the centre of the site development is approximately 226585, 381025.

3.2 Site Description

3.2.1 The development site comprises an area of mostly vacant land and buildings within the former Anglesey Aluminium works site complex which underwent a phased closure during the period of 2009 - 2013. Many of the original buildings have now been demolished ahead of site redevelopment.

3.2.2 The site incorporates several actively used buildings, as well as other derelict buildings, site roads, paved and other surfaced areas, and areas of tree planting and landscaping associated with its former use.

3.2.3 The existing main site entrances will be retained, with the primary access being at the North of the site onto the A5 London Road.

3.2.4 The application site extends in area to approximately 87.9Ha. Areas of existing green infrastructure, including the frontage lower lying land in the higher flood risk zone 3, covers an area of approximately 21.9Ha and is to remain undeveloped. This results in a developable area of ~ 66Ha – see the Parameters Plan submitted with the application (enclosed at Appendix B).

3.3 Surrounding Features

3.3.1 London Road forms the northern and eastern boundary of the site.

3.3.2 To the Northeast lies open scrubland extending to the coastline, which incorporates a public road (NC R5) and a number of residential properties.

3.3.3 To the East lies an area of woodland extending to the coastline (Penrhos Coastal Park) which incorporates a public road and a number of residential properties.

3.3.4 The Bangor to Holyhead railway lines form the southern boundary of the application site, to the south of which the A55 public roadway with agricultural land and woodland beyond extending to the village of Trearddur and the coastline.

3.3.5 Holyhead retail park and Penrhos industrial estate which lie on the Southeastern outskirts of Holyhead are situated immediately to the west of the application site.

3.3.6 The coastline of Holyhead Bay is situated approximately 0.4km to the North of the site.

3.3.7 The coastline of Beddmanarch Bay is situated approximately 0.6km to the East of the site.

3.4 Topography

3.4.1 A topographic survey of the development site area has been undertaken which shows that the existing ground levels over the area of the application site currently vary from ~ 6.55m to 9.41m OD(N).

3.4.2 Existing ground levels over the area of the former industrial development are shown to generally range from ~ 7.8m to 8.2m OD(N).

3.4.3 Existing road levels on London Road at the entrance to the site are shown to vary from ~ 4.85m to 4.71m OD(N) falling eastward down to a level of ~ 4.27m OD(N).

3.4.4 A copy of the topographic survey drawing is included in Appendix A.

3.5 Ground Conditions

3.5.1 Ground investigation work has been undertaken in respect of the proposed development (see separate Geo-environmental Engineer's ground investigation /soakaway summary report).

3.5.2 The results of the investigation work have shown that the local ground conditions are unsuitable for the use of soakaways as the means for disposal of the surface water run-off from the development.

3.5.3 A desktop study of the British Geological Survey map shows that the local geology comprises superficial deposits of Till, Devensian – Diamicton overlaying bedrock comprising New Harbour Group – Mica Schist and Psammite.

4.0 CONSULTATION

4.1 Consultation has taken place with the Applicant and their wider projects team in order to obtain relevant information pertaining to the proposed development.

4.2 Consultation has taken place with Planning Policy Wales Technical Advice Note 15 Development, flooding and coastal erosion (TAN 15) in order to obtain relevant information in respect of flood mapping, details of which are incorporated within this report.

4.3 A pre-application consultation has taken place with National Resources Wales (NRW) in respect of flood risk guidance for the application.

4.4 Initial consultation has also taken place with the LLFA/SAB Authority to inform the proposed drainage scheme solutions for the proposed development.

5.0 PROPOSED DEVELOPMENT

5.1 The Development

5.1.1 The application is for outline planning consent for a proposed B8 datacentre and technology campus led redevelopment at Prosperity Parc, Anglesey incorporating new development zones and building infrastructure extending in area up to approximately 66Ha.

5.1.2 The existing main site entrance, and a secondary entrance further East (also onto the A5), are proposed to be retained.

5.1.3 Following approval of the outline consent, details of the reserved matters including layout, appearance and other design detail of the development proposals will be submitted for approval by Anglesey County Council.

5.2 Flood Risk

5.2.1 In terms of flood risk vulnerability, the construction of buildings which are to be used for general industry, storage and distribution, offices and the like are classified as ‘Less Vulnerable’ development.

5.2.2 Any essential utility infrastructure including sub-stations are classified as ‘Essential Infrastructure’.

6.0 FOUL WATER DRAINAGE

6.1 The foul water drainage design for the development will be designed in accordance with the British Water Code of Practice 'Flows and Loads – 4'.

6.2 Welsh Water have been consulted regarding the proposed discharge foul wastewater from the development site to the public sewer network.

6.3 Welsh Water have advised that the foul flows generated by the proposed development should be connected to the foul sewer, at or downstream of manhole SH25818505 located to the north of the site.

6.4 A section 104 Agreement with Welsh Water will be required for this connection.

6.5 Welsh Water have been consulted regarding this proposal to check whether the treatment works has sufficient capacity to accept the foul wastewater run-off from the development.

6.6 It is currently envisaged that there is sufficient capacity within the existing wastewater treatment works to accommodate the treatment of domestic discharges from the development.

6.7 A copy of the pre-planning enquiry response from Wesh Water is included in Appendix C.

7.0 SURFACE WATER DRAINAGE

7.1 General

7.1.1 The surface water drainage will need to be designed in accordance with current CIRIA C753 SuDS Manual guidelines.

7.2 Existing Site

7.2.1 The site previously comprised the former Penrhos aluminium works, which is to be re-developed and comprised buildings, roads and paved areas, landscaping etc.

7.3 Run-off Destination

7.3.1 The preferred hierarchy for disposal of surface water is that consideration should firstly be given to soakaway, infiltration, watercourse and sewer in that priority order.

7.3.2 The underlying strata in the vicinity of the development is considered to be unsuitable for soakaways to be used as the means for disposal of surface water run-off from the new development (see Section 2.5 of this report).

7.3.3 The second preferred option would be to discharge the surface water run-off from the development to a watercourse.

7.3.4 A study of the local region has shown that there are a number of open drainage ditches located to the Northwest of the former Penrhos works.

7.3.5 However, the former drainage system from the Penrhos works discharges directly to Holyhead Bay via twin 1800mm pipes.

7.3.6 It is therefore proposed that the application site will utilise the existing outfall.

7.3.7 A copy of a drawing detailing the overall drainage layout to the former site complex is included in Appendix C.

7.4 Flood Risk

7.4.1 For new developments, the current design criteria required for the surface water drainage will need to be based upon the critical 1 in 100-year storm event, with an additional allowance to account for climate change resulting from global warming. There should be no above ground flooding for the 1 in 30-year return period and no property flooding or off-site flooding from the critical 1 in 100-year storm event, with the additional allowance to account for climate change.

7.5 Climate Change

7.5.1 Table 2 from the publication 'Adapting to Climate Change' published by the Welsh Government shows the potential anticipated change to extreme rainfall intensity for the years 2070 to 2115 is 20% for the central estimate and 40% for the upper estimate.

7.5.2 The publication advises that the drainage systems should be designed against the upper estimate.

7.6 Urban Creep

7.6.1 As the proposed development is not residential, it is considered that no allowance for urban creep will be required within the surface water drainage design.

7.7 Peak Flow Control

7.7.1 The impermeable area of the site which will need to be positively drained has been assessed at approximately 66.2ha.

7.7.2 SuDS Guidance advises that flows from the proposed development should be limited to the greenfield run-off rate.

7.7.3 However, as the proposal is for the surface water run-off from the development to discharge directly into the sea with no requirement to restrict the discharge rate for this particular project. This was agreed with the LLFA in a consultee meeting on the 11th June 2024, however formal approval will still need to be sought.

7.8 Design Output

7.8.1 Once the detailed layout of the development is available, hydraulic calculations will need to be undertaken to determine the pipe sizes and pipe gradients required to convey the surface water run-off from the site towards the existing outfall.

7.9 Drawings

7.9.1 Detailed drawings showing the surface water drainage strategy and SuDS components for the development will be prepared at the Reserved Matters stage of the application to reflect the layout and number of plots and buildings on-site once confirmed.

7.10 Volume Control

7.10.1 SuDS guidance advises that the run-off volume from the developed site for the 1 in 100 year 6-hour rainfall event should not exceed the greenfield run-off volume for the same event.

7.10.2 However, as stated above, an unrestricted discharge rate will be used for design purposes.

7.10.3 It is considered that the effect on the receiving body of water is insignificant and will be greatly reduced from the former usage of the site.

7.11 Designing for Exceedance

7.11.1 Flood risk from overland exceedance flows from the new surface water drainage network and from off-site sources should be mitigated largely by the new surface water drainage system.

7.11.2 The existing overland flow routes should generally be maintained within the final layout of the development site without increasing the flood risk to off-site parties.

7.11.3 Any existing flood risk may reduce by the creation of the new formal surface water drainage system but may not be entirely removed.

7.11.4 Ground levels over the area of the site will be re-profiled to suit the new development, albeit the changes to site levels are not expected to be significant given the relatively flat nature of the existing core of the site which will accommodate new built development.

7.11.5 The ground floor construction level of the building(s) will be raised above external ground level(s) which will be designed to shed water away from the building(s).

7.11.6 On this basis, there should be no risk to the development or increased risk to off-site parties from surface water exceedance arising from the development.

7.12 Pollution Control

7.12.1 It is a requirement to ensure that the quality of any receiving body is not adversely affected by the development.

7.12.2 Adequate pollution control measures will consequently need to be incorporated in the detailed design of the drainage network later in the planning process once end-users and occupiers are known.

7.13 Highways Drainage

7.13.1 It is not anticipated that the development will incorporate any formal highway drainage.

7.14 SuDS Features

7.14.1 According to the relevant guidance, SuDS features should be considered within the detailed design of the development. Such features to be considered, and included subject to site suitability and deliverability include the following: -

- The provision of rainwater harvesting.
- The provision of green roofs.
- The provision of permeable paving to reduce the velocity of the drainage discharge from impermeable areas into the drainage network.

- The use of infiltration for the disposal of surface water run-off.
- The use of filter drains or filter strips.
- The provision of open swales or detention basins.
- The provision of ponds and wetlands.
- The provision of geo-cellular/modular storage systems.

7.14.2 While it is already clear that some of the above list will not be suitable here – for example, infiltration – and others would likely present other technical challenges given the site's geological characteristics, consideration of which SuDS are most suitable will feature as part of the detailed drainage design once the site layout is known. Given the intent to deliver a 'campus' style site, the aspirations of the applicant are to incorporate surface water features into the new on-site green infrastructure and landscaping.

8.0 OPERATION AND MAINTENANCE

8.1 Operation and maintenance requirements for the various drainage and SuDS components will be agreed at the Reserved Matters stage of the application.

8.2 Operation and maintenance of the drainage and SuDS components listed should be undertaken in accordance with Chapter 32 of the CIRIA SuDS Manual, along with the relevant tables and any relevant manufacturer's recommendations.

8.3 The personnel undertaking the maintenance should have appropriate experience of SuDS and drainage maintenance and should be capable of keeping sufficiently detailed records of any inspections. An example of a checklist for SuDS maintenance can be found within Appendix B of the CIRIA C753 SuDS Manual v2. If personnel do not have appropriate experience, then specific inspection visits may be necessary. During the first year of operations of SuDS, inspections should usually be carried out at monthly intervals (and after significant storm events).

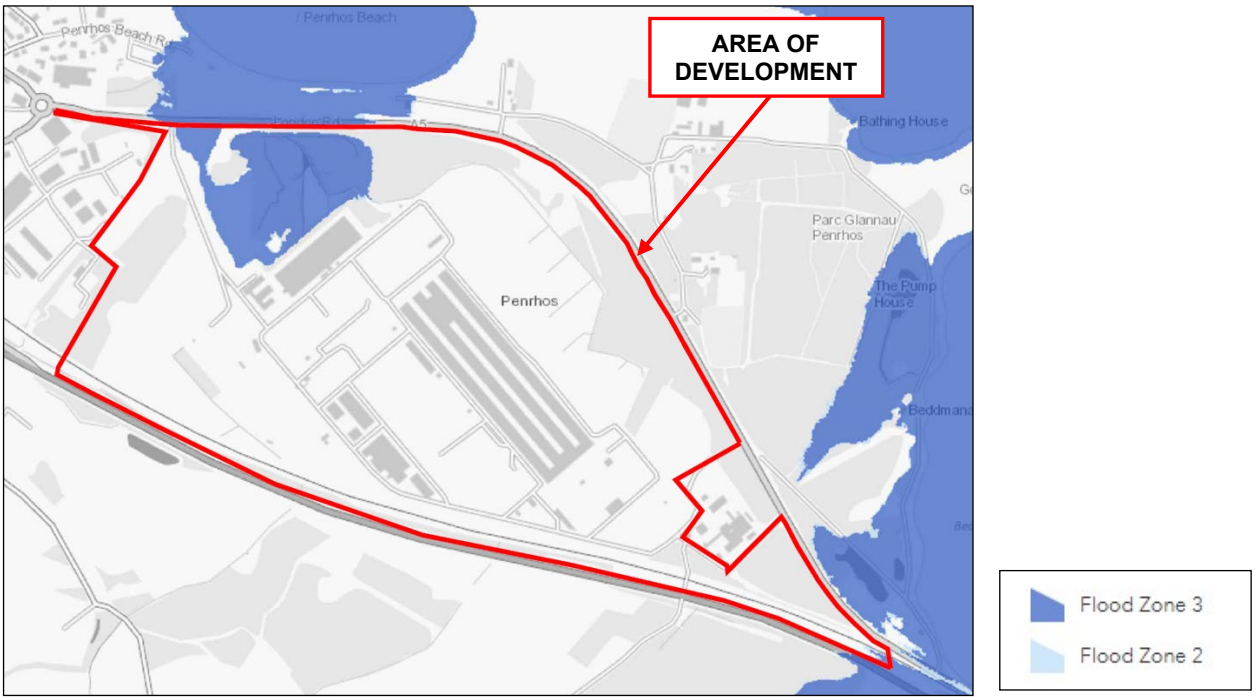
8.4 It is assumed that the responsibility for the operation and maintenance of the drainage and SuDS will lie with Anglesey Land Holdings Ltd, or any subsequent landowner of the site.

9.0 FLOOD RISK ASSESSMENT

9.1 Flood Map for Planning

9.1.1 A copy of the Flood Map for Planning produced by National Resources Wales is included in Figure 2 below.

Figure 2: Flood Map for Planning



9.1.2 The map shows that most of the application site lies in an area classified as Flood Zone 1 (very low risk of flooding) defined as having a less than 1 in 1000 (0.1%) chance of flooding in a given year.

9.1.3 There is a localised area in the North of the application site shown to lie in an area classified as Flood Zone 3 (medium and high risk of flooding) defined as having a greater than 1 in 100 (1%) chance of flooding in a given year, including climate change.

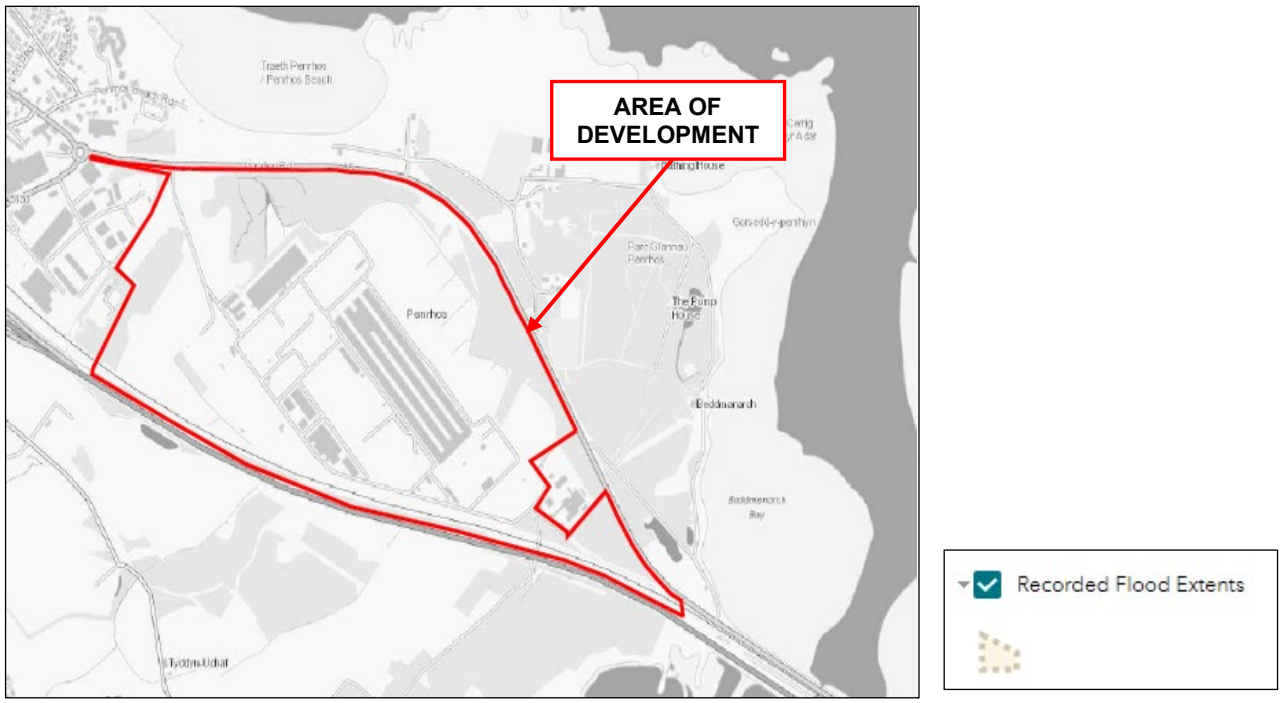
9.1.4 A narrow area of land adjacent to the extent of Flood Zone 2 (low risk of flooding) defined as having a less than 1 in 100 (1%) but greater than 1 in 1000 (0.1%) chance of flooding in a given year, including climate change.

9.1.5 However, as shown on the submitted Parameters Plan (Appendix B), the proposed built development is entirely outside of the areas within Flood Zone 2 and Zone 3, and new development is focused on those parts of the site which previously accommodated built development (buildings and other hard-standing or surfaced areas), and other areas within Flood Zone 1. The areas currently already at risk of flooding will be retained and enhanced as part of the on-site green infrastructure and habitat/biodiversity provision.

9.2 Historic Flooding

9.2.1 The map included in Figure 2 below showing the extent of recorded flood events shows that the site has not been affected by historical flood events.

Figure 2: Recorded Flood Extents

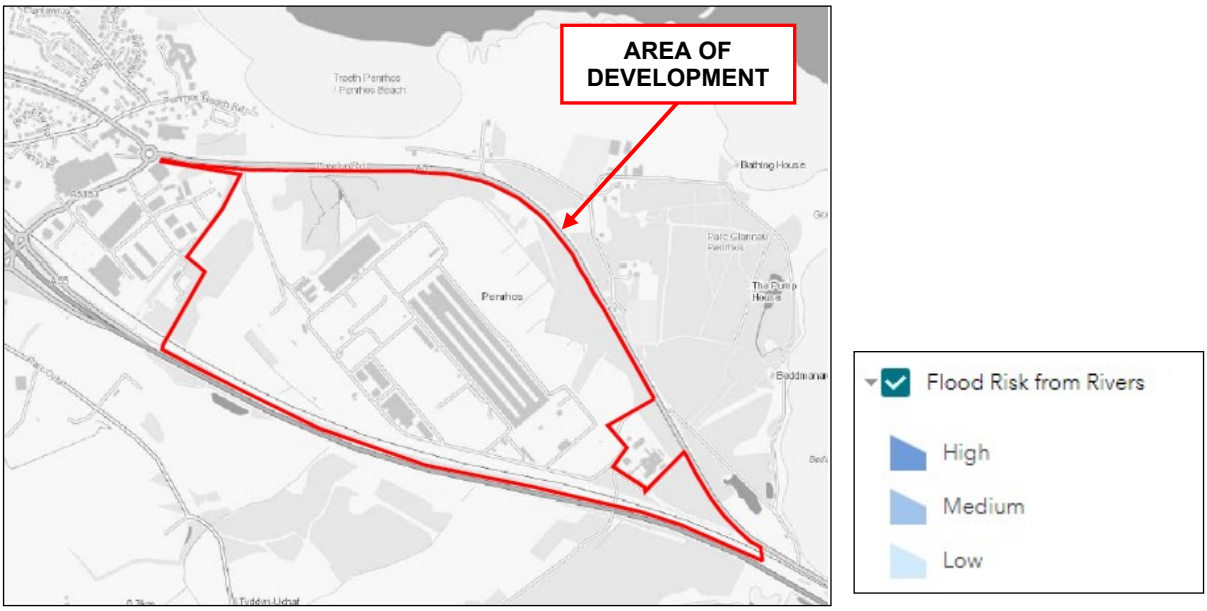


9.3 Flood Risk from Rivers

9.3.1 A study of the local region shows that there are no fluvial sources of flooding in the vicinity of the application site.

9.3.2 The map showing the extent of flooding from rivers is included in Figure 3 below.

Figure 3 – Extent of Flooding from Rivers Map



9.3.3 The map shows that the site is not considered to be at risk.

9.3.4 The risk from this potential flood source is considered to be low and acceptable.

9.4 Flood Risk from the Sea

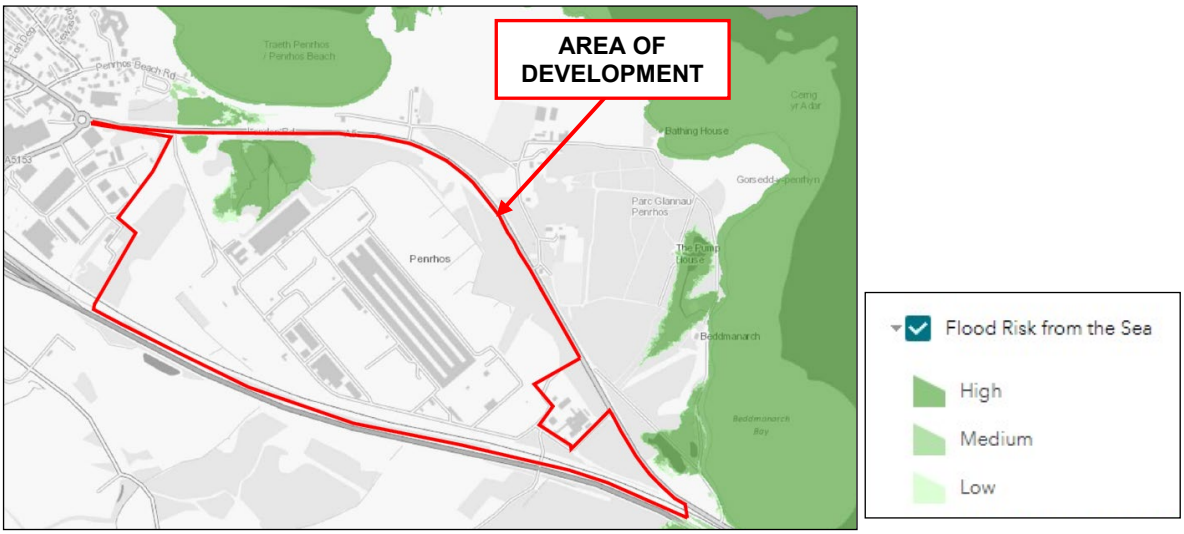
9.4.1 The highest recorded astronomical tidal level in the region is 3.28m OD(N).

9.4.2 An allowance for sea level rise resulting from climate change needs to be considered.

9.4.3 For a 75-year design life of the development the anticipated sea level rise is approximately 1.0m and consequently the predicted flood water level for design purposes is approximately 4.30m OD(N).

9.4.4 The The map showing the extent of flooding from the sea is included in Figure 4 below.

Figure 4 – Extent of Flooding from the Sea Map



9.4.5 The map shows that a small area in the northern area of the site is considered to be at 'Medium' risk of flooding, with the surrounding area shown to be at 'Low' risk of flooding.

9.4.6 The coastline of Holyhead Bay lies approximately 0.4km to the north of the site.

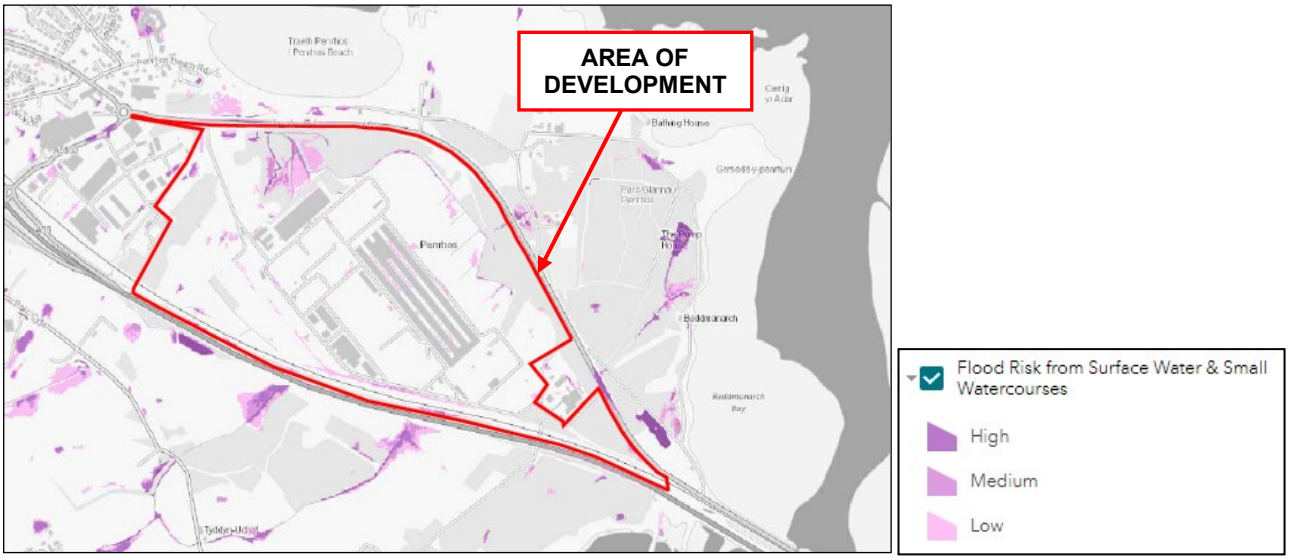
9.4.7 The coastline of Beddmanarch Bay lies approximately 0.6km to the east of the site, with the coastline of the Inland Sea lying approximately 0.5km to the Southeast of the site.

9.4.8 Flood mitigation measures, will however, need to be considered for any new development in the northern area of the site which is shown to be subject to coastal flooding. Details of such measures are set out in Section 10 of this report.

9.5 Flood Risk from Surface Water and Small Watercourses

9.5.1 An abstract from the extent of flooding (surface water and small watercourse) map is included in Figure 5 below, which shows that the majority of the development site lies in an area which is considered to be at risk from surface water flooding.

Figure 5 – Extent of Flooding (surface water and small watercourses) Map



9.5.2 There are, however, various isolated areas of the site shown to be at risk from surface water flooding, varying from 'Low' risk to 'High' risk.

9.5.3 This will need to be addressed within the design of the floor levels and external ground levels for the re-development of the site.

9.6 Flooding from Open Drainage Ditches

9.6.1 There are no open drainage ditches located within the vicinity of the development site which could pose a risk of flooding to the development.

9.6.2 The risk of flooding from this potential flood source is therefore considered to be low and acceptable.

9.7 Groundwater Flooding

9.7.1 Groundwater flooding can occur when the sub-surface water levels are high and emerges above ground level.

9.7.2 It is envisaged that the project is unlikely to involve any deep excavation works and consequently the risk of flooding from this potential flood source is low and acceptable. However, if any deep excavation works are needed within the redevelopment, then this will require further assessment and mitigation measures to be put in place.

9.7.3 The risk of flooding from this potential flood source is therefore considered to be low and acceptable.

9.8 Flood Risk from Existing Water Mains

9.8.1 There are no existing live water mains known to lie within the area of the application site.

9.8.2 The risk of flooding to the development from this potential flood source is therefore considered to be low and acceptable.

9.9 Flood Risk from Existing Sewers

9.9.1 There are existing drainage services present in the location of the application site which served the former industrial development on the site.

9.9.2 The application site formerly comprised a larger industrial site, which incorporated an extensive combined drainage network for foul wastewater and surface water run-off from the various buildings, roads and paved areas.

9.9.3 The surface water drainage system formerly discharged directly into Holyhead Bay via twin 1800mm diameter pipes.

9.9.4 Whilst much of the existing sewer network will become redundant, it is proposed that the new development will utilise the existing outfall.

9.9.5 This outfall is situated at low tide level, discharging directly onto the beach.

9.9.6 As the general site level is approximately 3m above the outfall level, the outfall does not pose a direct risk of flooding to the site.

9.9.7 However, at high tidal levels the outfall pipes are submerged and may pose a risk of flooding from the new drainage network overtopping.

9.9.8 As a precautionary measure, it would be advisable to install anti-flood valves on the outfall pipes. This is expected to form part of any site-wide drainage and flood-risk mitigation measures, to be secured as part of detailed drainage design for the site in due course.

9.10 Flood Risk from Existing Conveyor or Tunnel

9.10.1 An existing tunnel from the site to the nearby port, that runs underground and is currently assumed to be maintained and potentially used in the future. The entrance to it at both sides is above the flood level and it is a sealed tunnel therefore the risk is 'low'.

9.10.2 The risk of flooding to the development from this potential flood source is therefore considered to be low and acceptable.

9.11 Flood Risk from New Drainage Services

9.11.1 The new drainage services will be designed to the required standards and therefore the risk of flooding to the development or to other parties beyond the curtilage of the site will be adequately addressed.

9.11.2 The risk to the development from this potential flood source is therefore considered to be low and acceptable.

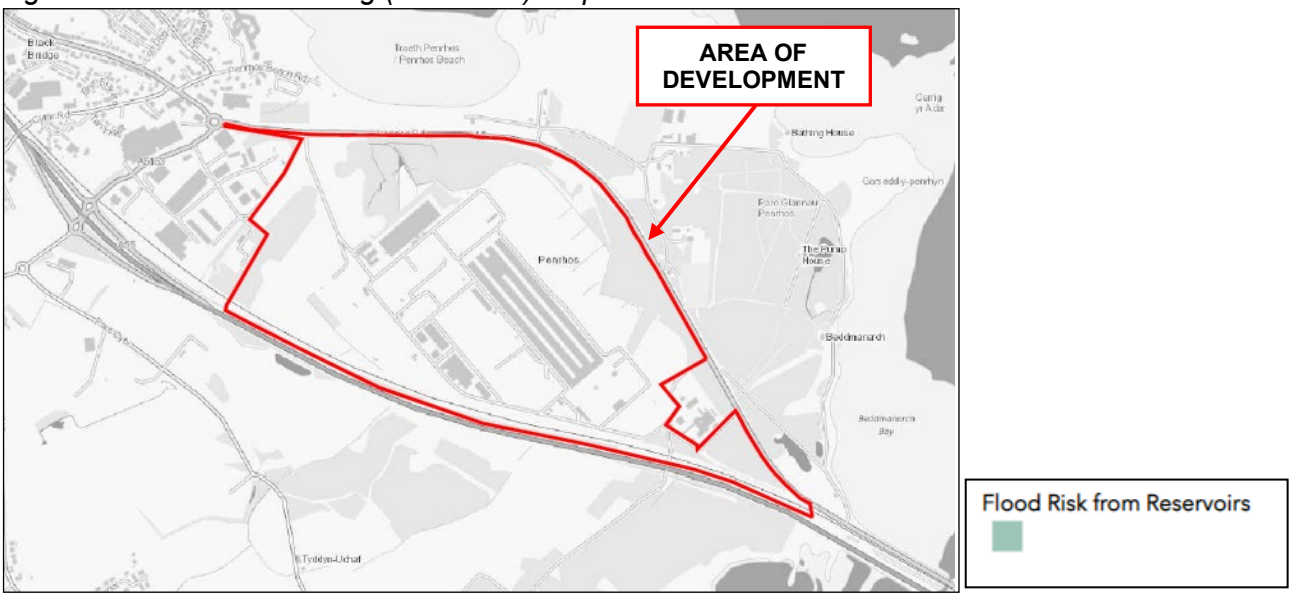
9.12 Flooding from Reservoirs, Canals and Other Artificial Sources

9.12.1 A study of the region shows that there are no reservoirs, canals or other artificial sources in the area which could pose a risk of flooding to the application site.

9.12.2 However, records show that there is an existing below-ground conveyor belt and tunnel which is situated between the site and the port which served the former aluminium works.

9.12.3 An abstract from the extent of flooding (reservoirs) map is included in Figure 6 below, which shows that the site is not at risk from flooding resulting from a failure of any reservoir defences.

Figure 6 – Extent of Flooding (reservoirs) Map



9.12.4 The risk to the development from reservoir flooding is considered to be low and acceptable.

9.12.5 The risk to the development from any such potential flood source is therefore considered to be low and acceptable.

10.0 FLOOD MITIGATION MEASURES

10.1 General

10.1.1 The majority of the development site is shown to lie within an area classified as 'low risk of flooding' on the maps included in TAN 15 showing the extent of flooding from rivers of the sea.

10.1.2 An area of the site in proximity to the northern site boundary is shown to lie in Flood Zone 3 (high risk of flooding).

10.1.3 It is advisable that any new developments in this area of the site should be classified as 'Less Vulnerable' in terms of flood risk vulnerability. However, as described earlier in this report and shown on the submitted Parameters Plan, no buildings or other built development are proposed to be located in Flood Zone 3.

10.1.4 However, as portions of the redevelopment area are susceptible to surface water flooding as shown in Figure 5, 'Low Risk' adequate flood mitigation works will need to be incorporated within the design of such developments in order to provide sufficient flood protection.

10.1.5 Details of such flood measures are set out below.

10.1.6 The redevelopment site does not lie within Flood Zone 3 and is located within Flood Zone 1. However, due to the risk from surface water flooding it is proposed that finished floor levels for the buildings will need to be elevated to a minimum height of 300mm above the existing ground levels.

10.2 Passive Flood Protection

10.2.1 Isolated areas of the site are shown to be at risk from overland surface water flooding based on the site layout of the former industrial development.

10.2.2 Levels over the area of the application site will be re-profiled where required to suit the new development and any existing depressions will be infilled. On this basis it is considered that any risk to the development from overland surface water flooding will be adequately addressed.

10.2.3 No other specific flood mitigation or flood resistance measures are considered to be necessary for the development proposals.

10.3 Flood Resilience

10.3.1 Flood resilient construction methods will need to be incorporated within any new buildings which are susceptible to surface water flooding.

10.3.2 The normal requirement is to provide 300mm of flood resilience within the buildings above the elevated floor level in order to reduce the risk of flood damage occurring and to enable the buildings to be brought back into use more readily should flood waters enter the building.

10.3.3 General flood resilience measures are set out below.

- The ground floors should be constructed from solid concrete on an appropriate damp proof membrane.
- There should be no voids, other than doorways, in the external walls of the building within 300mm of the floor construction level which could allow flood waters to enter the building.
- Any internal partition walls should be of suitable robust construction or metal stud partitions fixed with plasterboard, with the lower boarding laid horizontally for ease of replacement.
- All electrical apparatus within the buildings should be elevated to a minimum height of 300mm above floor level in order to prevent damage occurring should flood waters enter the buildings.
- All cables should be routed at high level with vertical drops to the fittings.
- All other flood sensitive equipment should be similarly elevated.
- Floor finishes provided at ground floor level should be appropriate, allowing for ease of cleaning after flooding without incurring damage, to ensure the building easily be brought back into use.

10.3.4 Alternatively, the ground floor construction level could be elevated by a further 300mm which would negate the need for flood resilient construction methods to be incorporated within the buildings.

10.4 Compensatory Flood Storage

10.4.1 Any construction of new buildings within the flood zone would displace flood water.

10.4.2 However, as the source of the flooding is tidal, there is no requirement to provide any compensatory flood storage.

10.5 Safe Refuge

10.5.1 Any buildings located in any area susceptible to flooding will need to incorporate accommodation at first floor level in order to ensure safe refuge is available within the building should a severe flood situation arise, and safe evacuation measures cannot be implemented.

10.6 Access/Egress

10.6.1 The public road network in the local vicinity of the development is shown lie in Flood Zone 3 (high risk of flooding) and consequently access to/or egress from the development could be affected during the peak time of a major flood scenario.

10.6.2 In order to ensure that safe access/egress can be maintained, the second emergency site access further East along the Northern site boundary would serve to ensure dry access onto the public road network.

10.7 Management

10.7.1 It would be advisable for the development to subscribe to flood alerts with Natural Resources of Wales, which will alert the occupants of any likely flood situations. This will then enable a safe evacuation of the site should the need arise and for travel/delivery arrangements to be programmed accordingly.

11.0 SUMMARY

11.1 This report has been prepared to assess the flood consequence and drainage implications for a proposed B8 datacentre led (with B1 research and development office uses) redevelopment at Prosperity Parc located to the Southeast of Holyhead, Isle of Anglesey, Wales.

11.2 The majority of the application site is shown to fall in Flood Zone 1 (very low risk of flooding).

11.3 An area of the site in proximity to the Northern site boundary is shown to lie in Flood Zone 3 (high risk of flooding). However, no new built development is proposed in that part of the site.

11.4 This report has considered potential sources of flooding to the site, including fluvial, coastal, surface water, existing sewers, water mains and other artificial sources.

11.5 The primary risk of flooding to the site is considered to be from tidal flooding from Holyhead Bay during a future flood event.

11.6 Isolated areas of the site are shown to be at risk from overland surface water flooding.

11.7 Mitigation measures will be required within the site design to reduce the risk of flooding to the development to an acceptable level and ensure there is:

- Minimal risk to life;
- Minimal disruption to people living;
- Minimal potential damage to property;
- Minimal impact of the proposed development on flood risk generally; and,
- Minimal disruption to the sustainable management of natural resources.

11.8 Overall, this report demonstrates that the flood risk to the site is reasonable and acceptable providing the required flood mitigation measures are incorporated within the final design.

11.9 The report also demonstrates that the site can be suitably drained, providing the drainage network serving the development is designed and constructed to the required standards in compliance with local and national planning policies.

11.10 It is proposed that surface water run-off from the development will be discharged to the existing surface water outfall into Holyhead Bay to the north of the site at an unrestricted rate of discharge.

11.11 It is proposed that the foul wastewater run-off from the development will be discharged to the existing sewage treatment works located to the north east of the site.

11.12 The application is in outline with all matters, including layout and design, being reserved. It is therefore considered that planning consent for the development can be granted in terms of the flood risk and drainage aspects of this application.

Alan Wood & Partners

APPENDIX A

Topographic Survey Drawings

Notes

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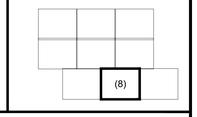
OS National Grid & Datum.

Using the OSTN15 transformation and removing scale factor for true on ground measurements and OSGM15 Geoid model for datum corrections.

N O R T H

Direction of North

Layout Key



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S12A	226530.665	380815.801	8.148
S13A	226530.665	380815.801	8.148
S26	226932.938	381227.392	7.567
S2C	225996.356	381387.779	8.035
S3A	226472.843	380926.409	8.160

KEY

AIR VALVE	AV	LAMP POST	LP
SITE DATUM	DATUM	MANHOLE (CIRCULAR)	MH
BIN	BIN	MANHOLE (RECTANGULAR)	MH
BOLLARD	BO	MANHOLE (TRIANGULAR)	MH
BORE HOLE	BH	MARKER POST	MKR
BUS STOP	BUS	GULLY	GU
CABLE TV COVER	CTV	RODDING EYE	RE
CABLE TV SUPPLY	C	SIGN POST	SIGN
COLUMN	COL	TELECOM COVER	TEL
EARTHING POINT	ER	TELEGRAPH POLE	TP
ELECTRICITY COVER	ELEC	THRESHOLD LEVEL	THL
ELECTRICITY POLE	EP	TRAFFIC LIGHT	TL
ELECTRIC CABLE/SUPPLY	E	TRAFFIC SIGNALS COVER	TS
FIRE HYDRANT	FH	WATER METER	WM
GAS VALVE	GAS	WASH OUT	WO
GAS RISER/SUPPLY	GR	WATER STOP COCK	SC
GATE		WATER STOP VALVE	BV
INSPECTION COVER (CIRCULAR)	IC	TOP OF WALL	TOW
INSPECTION COVER (RECTANGULAR)	IC	TOP OF FENCE	TOF
KERB OUTLET	KO	TOP OF HEDGE	TOH

COVER LEVEL	CL	GIRTH OF TREE TRUNK(m)	G
INVERT LEVEL	IL	MULTI BOLE TREE	MB
UNABLE TO RAISE	UTR	HEIGHT TO TOP OF TREE CANOPY	H
CHAMBER BASE LEVEL	CHL		
WATER SURFACE LEVEL	WL		
UNABLE TO MEASURE	UTM		

Rev	Date	Drawn	Description	Check
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Client: Anglesey Holdings Limited

Site: Site off London Road, Holyhead.

Title: 3D Topographical Survey

Surveyed	CC, AT	Drawn	CC, AT, KW
Chk.	JM	Date	14/07/23
Scale [A0 Sheet]	1/500	DWG Ref (Layout No)	MIG_655_3DT(A0-L8)
Status	FINAL		
Job No	MIG_655	Rev	Ø

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N O R T H

Direction of North

Layout Key

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BUS STOP	BUS	GULLY	GU
CABLE TV COVER	CTV	RODDING EYE	RE
CABLE TV SUPPLY	C	SIGN POST	SIGN
COLUMN	COL	TELECOM COVER	TEL
EARTHING POINT	ER	TELEGRAPH POLE	TP
ELECTRICITY COVER	ELEC	THRESHOLD LEVEL	THL
ELECTRICITY POLE	EP	TRAFFIC LIGHT	TL
ELECTRIC CABLE/SUPPLY	E	TRAFFIC SIGNALS COVER	TS
FIRE HYDRANT	FH	WATER METER	WM
GAS VALVE	GAS	WASH OUT	WO
GAS RISER/SUPPLY	GR	WATER STOP COCK	SC
GATE		WATER STOP VALVE	BV
INSPECTION COVER (CIRCULAR)	IC	TOP OF WALL	TOW
INSPECTION COVER (RECTANGULAR)	IC	TOP OF FENCE	TOF
KERB OUTLET	KO	TOP OF HEDGE	TOH

COVER LEVEL	CL	GIRTH OF TREE TRUNK(m)	G
INVERT LEVEL	IL	MULTI BOLE TREE	MB
UNABLE TO RAISE	UTR	HEIGHT TO TOP OF TREE CANOPY	H
CHAMBER BASE LEVEL	CHL		
WATER SURFACE LEVEL	WL		
UNABLE TO MEASURE	UTM		

Rev	Date	Drawn	Description	Check
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Chk.	JM	Date	14/07/23
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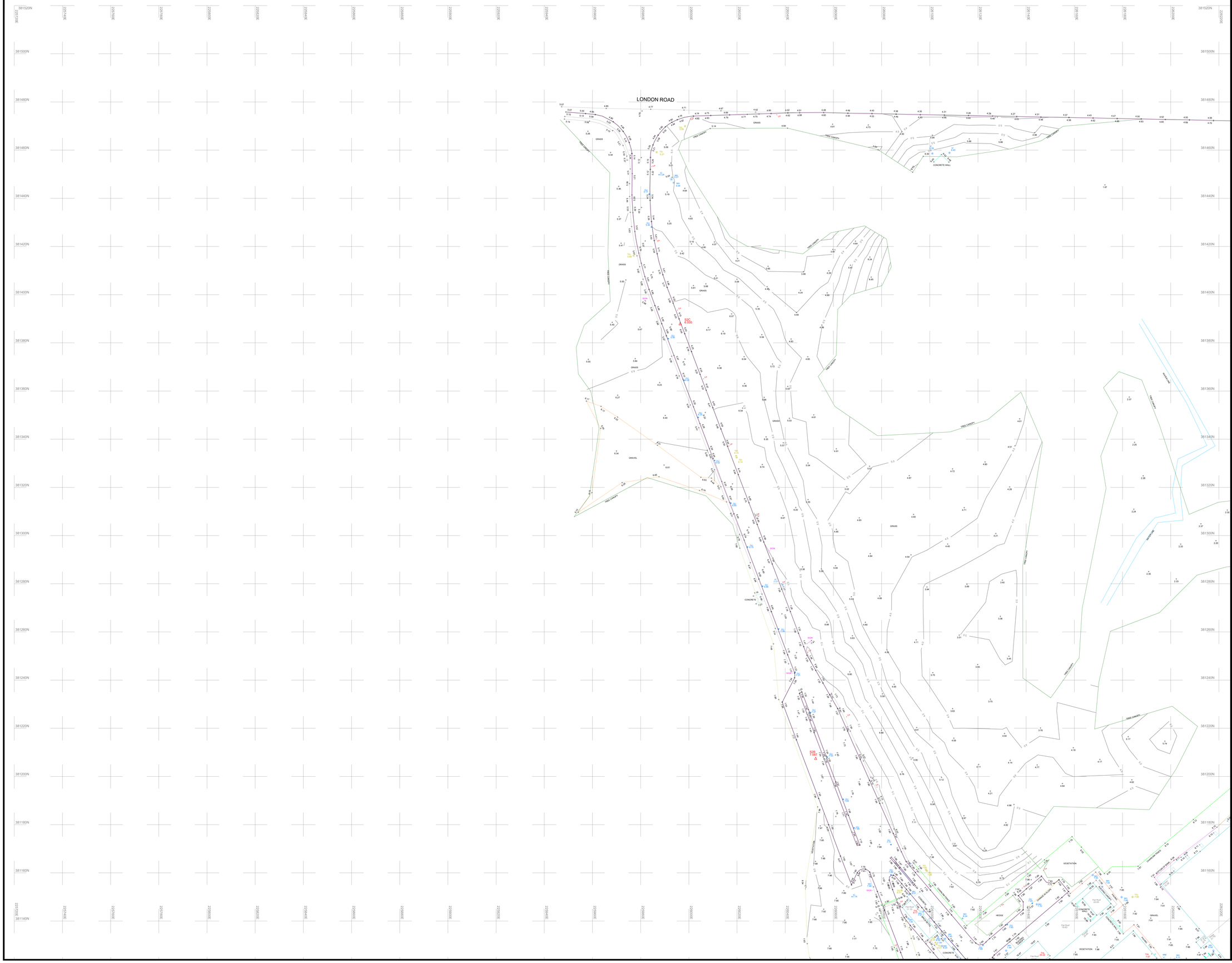

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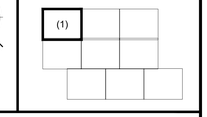
OS National Grid & Datum.

Using the OSTN15 transformation and removing scale factor for true on ground measurements and OSGM15 Geoid model for datum corrections.

NORTH

Direction of North

Layout Key



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S2C	225996.356	381387.779	8.035
S3A	226472.843	380926.409	8.160

KEY

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BORE HOLE	BH	MARKER POST	MKR
BUS STOP	BUS	GULLY	GU
CABLE TV COVER	CTV	RODDING EYE	RE
CABLE TV SUPPLY	C	SIGN POST	SIGN
COLUMN	COL	TELECOM COVER	TEL
EARTHING POINT	ER	TELEGRAPH POLE	TP
ELECTRICITY COVER	ELEC	THRESHOLD LEVEL	THL
ELECTRICITY POLE	EP	TRAFFIC LIGHT	TL
ELECTRIC CABLE/SUPPLY	E	TRAFFIC SIGNALS COVER	TS
FIRE HYDRANT	FH	WATER METER	WM
GAS VALVE	GAS	WASH OUT	WO
GAS RISER/SUPPLY	GR	WATER STOP COCK	SC
GATE		WATER STOP VALVE	BV
INSPECTION COVER (CIRCULAR)	IC	TOP OF WALL	TOW
INSPECTION COVER (RECTANGULAR)	IC	TOP OF FENCE	TOF
KERB OUTLET	KO	TOP OF HEDGE	TOH

COVER LEVEL	CL	GIRTH OF TREE TRUNK(m)	G
INVERT LEVEL	IL	MULTI BOLE TREE	MB
UNABLE TO RAISE	UTR	HEIGHT TO TOP OF TREE CANOPY	H
CHAMBER BASE LEVEL	Ch.L		
WATER SURFACE LEVEL	WL		
UNABLE TO MEASURE	UTM		

Rev	Date	Drawn	Description	Check
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Client: Anglesey Holdings Limited

Site: Site off London Road, Holyhead.

Title: 3D Topographical Survey

Surveyed	CC, AT	Drawn	CC, AT, KW
Chk.	JM	Date	14/07/23
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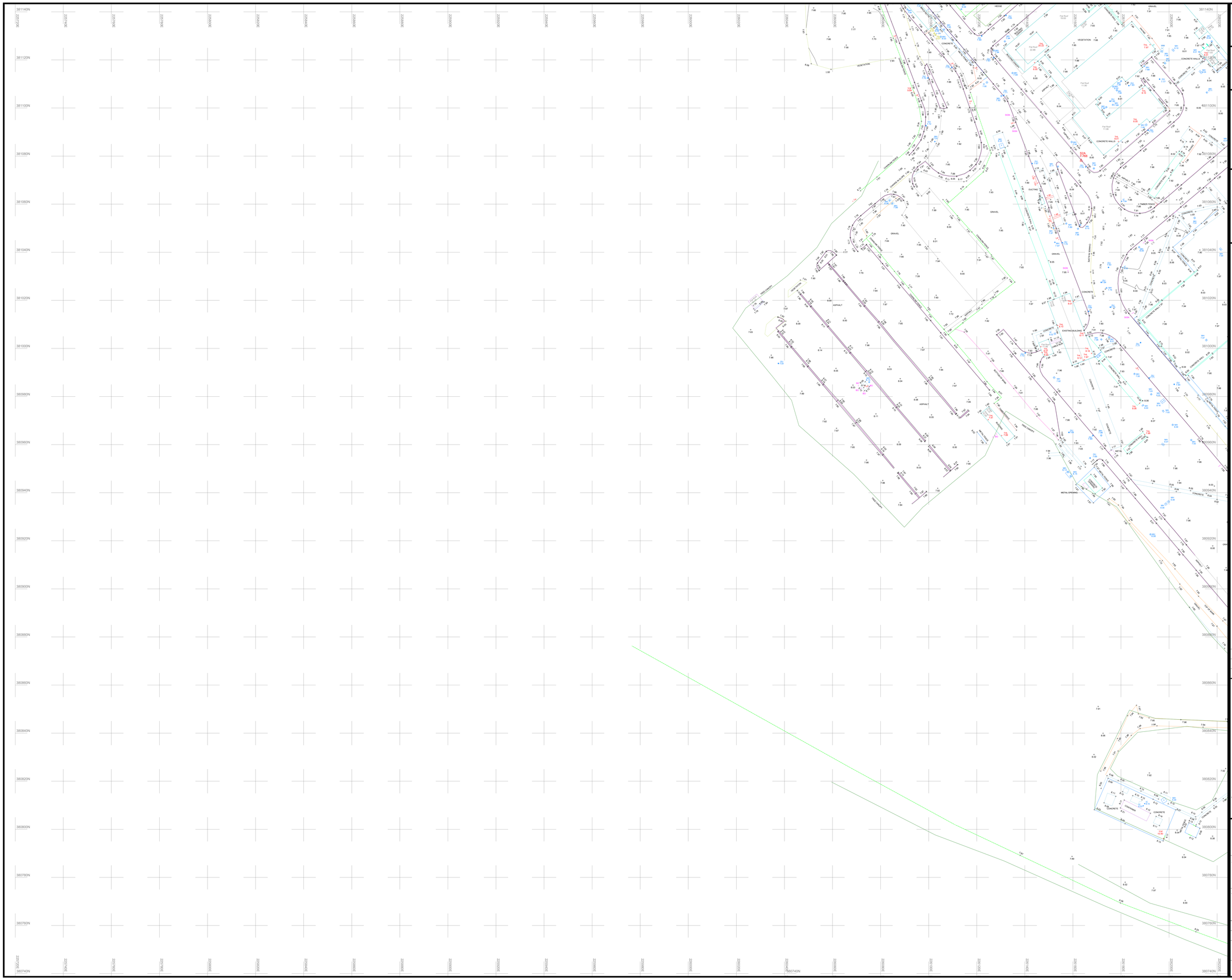
Job No	MIG_655	Rev	Ø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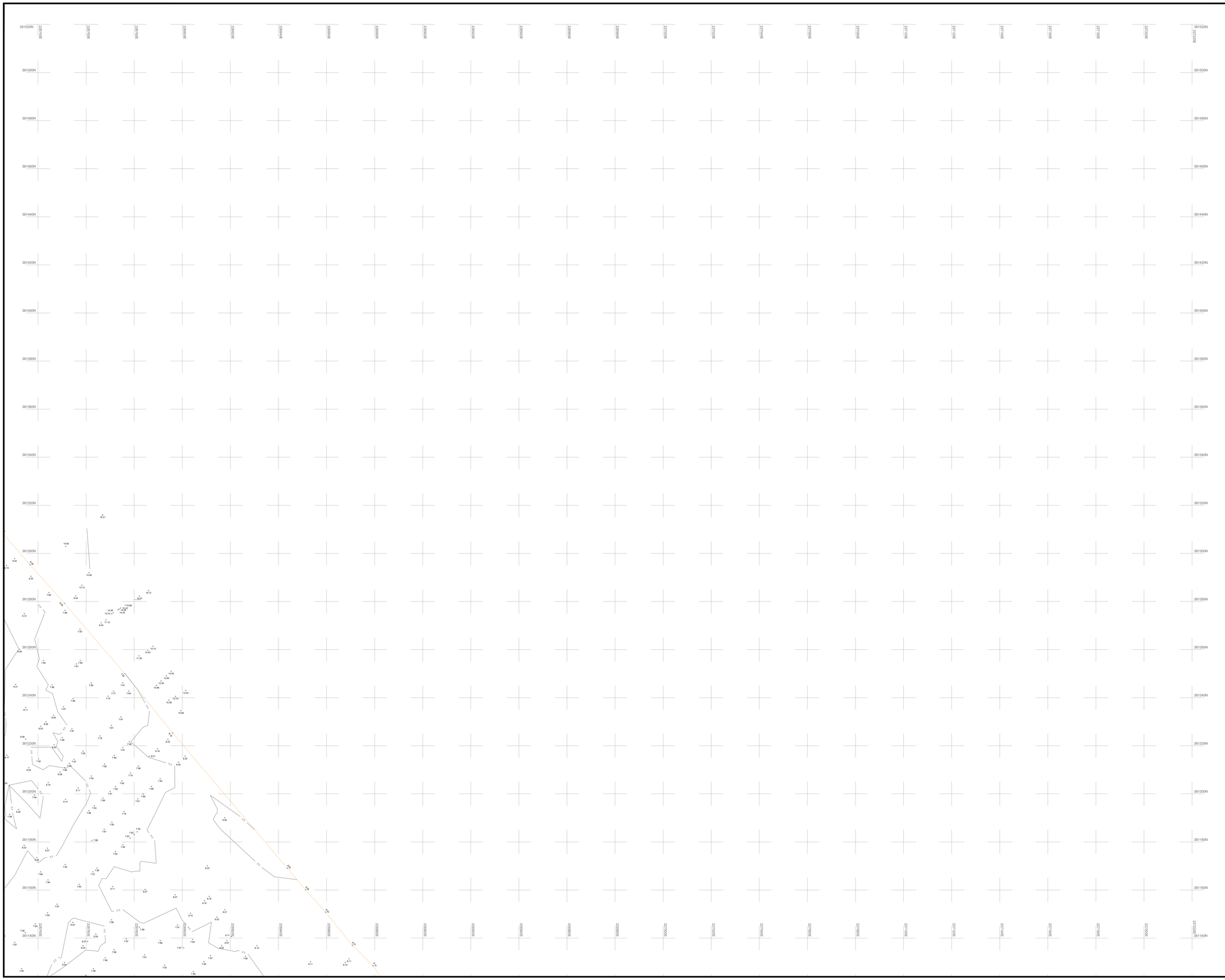

Notes

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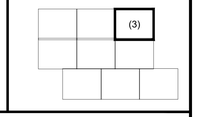
OS National Grid & Datum.

Using the OSTN15 transformation and removing scale factor for true on ground measurements and OSGM15 Geoid model for datum corrections.

NORTH

Direction of North

Layout Key



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S26	226932.838	381207.392	7.597
S2C	225996.356	381387.779	8.035
S3A	226472.843	380926.409	8.160

KEY

AIR VALVE	AV	LAMP POST	LP
SITE DATUM	DATUM	MANHOLE (CIRCULAR)	MH
BIN	BIN	MANHOLE (RECTANGULAR)	MH
BOLLARD	BO	MANHOLE (TRIANGULAR)	MH
BORE HOLE	BH	MARKER POST	MKR
BUS STOP	BUS	GULLY	GU
CABLE TV COVER	CTV	RODDING EYE	RE
CABLE TV SUPPLY	C	SIGN POST	SIGN
COLUMN	COL	TELECOM COVER	TEL
EARTHING POINT	ER	TELEGRAPH POLE	TP
ELECTRICITY COVER	ELEC	THRESHOLD LEVEL	THL
ELECTRICITY POLE	EP	TRAFFIC LIGHT	TL
ELECTRIC CABLE/SUPPLY	E	TRAFFIC SIGNALS COVER	TS
FIRE HYDRANT	FH	WATER METER	WM
GAS VALVE	GAS	WASH OUT	WO
GAS RISER/SUPPLY	GR	WATER STOP COCK	SC
GATE		WATER STOP VALVE	BV
INSPECTION COVER (CIRCULAR)	IC	TOP OF WALL	TOW
INSPECTION COVER (RECTANGULAR)	IC	TOP OF FENCE	TOF
KERB OUTLET	KO	TOP OF HEDGE	TOH

COVER LEVEL	CL	GIRTH OF TREE TRUNK(m)	G
INVERT LEVEL	IL	MULTI BOLE TREE	MB
UNABLE TO RAISE	UTR	HEIGHT TO TOP OF TREE CANOPY	H
CHAMBER BASE LEVEL	CHL		
WATER SURFACE LEVEL	WL		
UNABLE TO MEASURE	UTM		

Rev	Date	Drawn	Description	Check
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Chk.	JM	Date	14/07/23
Scale [A0 Sheet]	1/500	DWG Ref (Layout No)	MIG_655_3DT(A0-L3)
Status	PRELIM		
Job No	MIG_655	Rev	Ø

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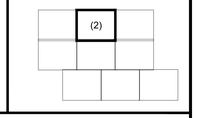
N O R T H

Direction of North

Layout Key



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S2C	225996.356	381387.779	8.035
S3A	226472.843	380926.409	8.160

KEY

AIR VALVE	AV	LAMP POST	LP
SITE DATUM	DATUM	MANHOLE (CIRCULAR)	MH
BIN	BIN	MANHOLE (RECTANGULAR)	MH
BOLLARD	BO	MANHOLE (TRIANGULAR)	MH
BORE HOLE	BH	MARKER POST	MKR
BUS STOP	BUS	GULLY	GU
CABLE TV COVER	CTV	RODDING EYE	RE
CABLE TV SUPPLY	C	SIGN POST	SIGN
COLUMN	COL	TELECOM COVER	TEL
EARTHING POINT	ER	TELEGRAPH POLE	TP
ELECTRICITY COVER	ELEC	THRESHOLD LEVEL	THL
ELECTRICITY POLE	EP	TRAFFIC LIGHT	TL
ELECTRIC CABLE/SUPPLY	E	TRAFFIC SIGNALS COVER	TS
FIRE HYDRANT	FH	WATER METER	WM
GAS VALVE	GAS	WASH OUT	WO
GAS RISER/SUPPLY	GR	WATER STOP COCK	SC
GATE		WATER STOP VALVE	BV
INSPECTION COVER (CIRCULAR)	IC	TOP OF WALL	TOW
INSPECTION COVER (RECTANGULAR)	IC	TOP OF FENCE	TOF
KERB OUTLET	KO	TOP OF HEDGE	TOH

COVER LEVEL	CL	GIRTH OF TREE TRUNK(m)	G
INVERT LEVEL	IL	MULTI BOLE TREE	MB
UNABLE TO RAISE	UTR	HEIGHT TO TOP OF TREE CANOPY	H
CHAMBER BASE LEVEL	CHL		
WATER SURFACE LEVEL	WL		
UNABLE TO MEASURE	UTM		

Rev	Date	Drawn	Description	Check
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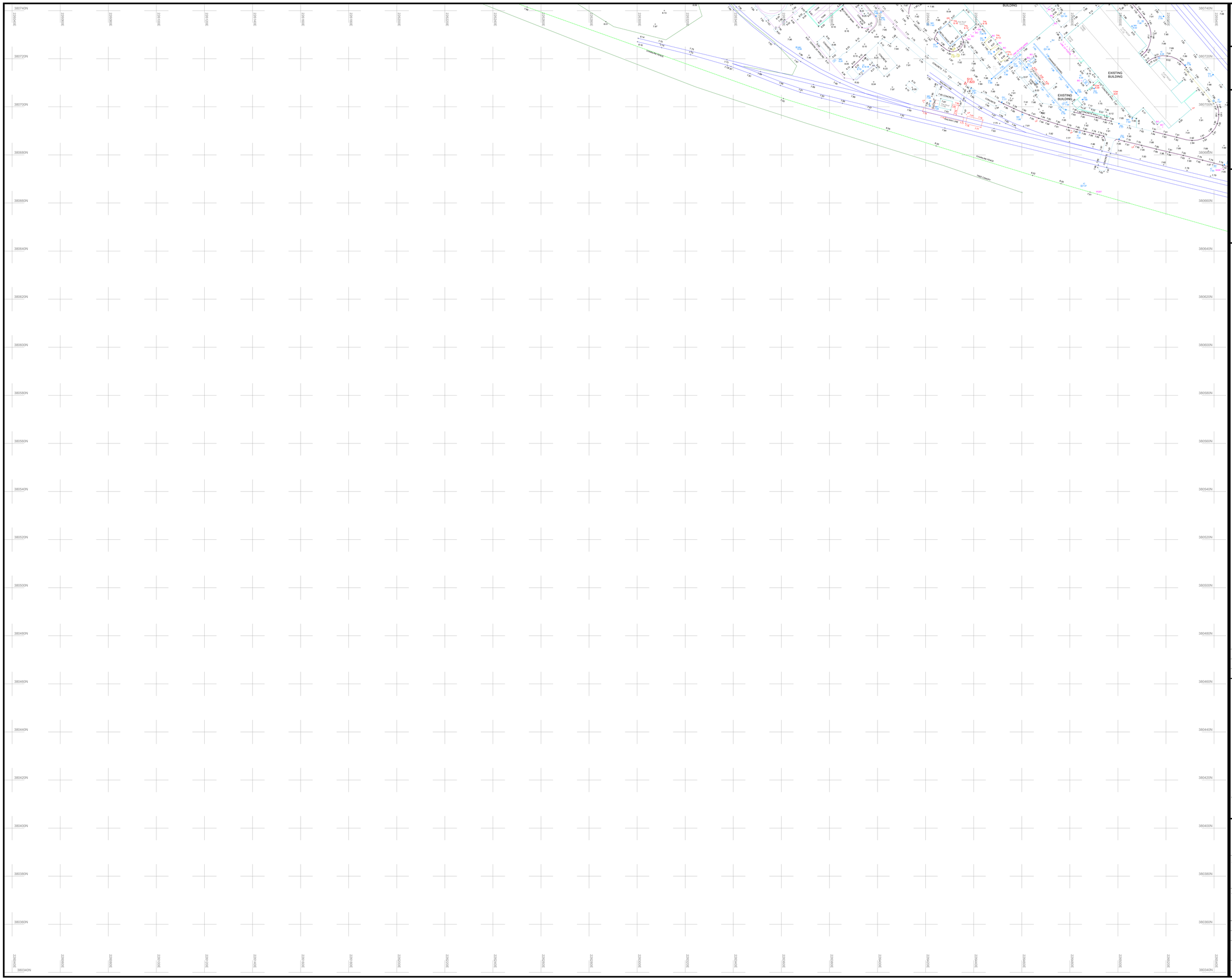
Web : www.morrisig.co.uk
E: contact@morrisig.co.uk

Client	Anglesey Holdings Limited
Site	Site off London Road, Holyhead.
Title	3D Topographical Survey

Surveyed	CC, AT	Drawn	CC, AT, KW
Chk.	JM	Date	14/07/23
Scale [A0 Sheet]	1/500	DWG Ref (Layout No)	MIG_655_3DT(A0-L2)
Status	PRELIM		
Job No	MIG_655	Rev	Ø



Notes

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OS National Grid & Datum.

Using the OSTN15 transformation and removing scale factor for true on ground measurements and OSGM15 Geoid model for datum corrections.

N O R T H

Direction of North

Layout Key

(7)

Station Coordinate Table

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S2	226238.575	381095.599	7.910
S3	226096.263	381009.888	8.010
S4	225915.599	381009.945	8.096
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S7	226777.946	380924.004	7.794
S8	226866.699	380824.004	7.794
S9	226964.129	380721.161	7.780
S10	227061.796	380621.161	7.813
S11	226683.798	380642.169	7.813
S12	226577.946	380669.044	7.816
S13	226478.405	380691.043	7.768
S14	226356.405	380701.043	7.768
S15	226250.305	380931.699	7.806
S10A	226966.990	380575.950	8.596
S12A	226530.665	380615.801	8.148
S13A	226431.124	380637.800	8.100
S26	226932.838	381227.392	7.597
S2C	225996.356	381387.779	8.035
S3A	226472.843	380926.409	8.160

KEY

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CABLE TV SUPPLY	C	SIGN POST	SIGN
COLUMN	COL	TELECOM COVER	TEL
EARTHING POINT	ER	TELEGRAPH POLE	TP
ELECTRICITY COVER	ELEC	THRESHOLD LEVEL	THL
ELECTRICITY POLE	EP	TRAFFIC LIGHT	TL
ELECTRIC CABLE/SUPPLY	E	TRAFFIC SIGNALS COVER	TS
FIRE HYDRANT	FH	WATER METER	WM
GAS VALVE	GAS	WASH OUT	WO
GAS RISER/SUPPLY	GR	WATER STOP COCK	SC
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INSPECTION COVER (CIRCULAR)	IC	TOP OF WALL	TOW
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INVERT LEVEL	IL	MULTI BOLE TREE	MB
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CHAMBER BASE LEVEL	CHL		
WATER SURFACE LEVEL	WL		
UNABLE TO MEASURE	UTM		

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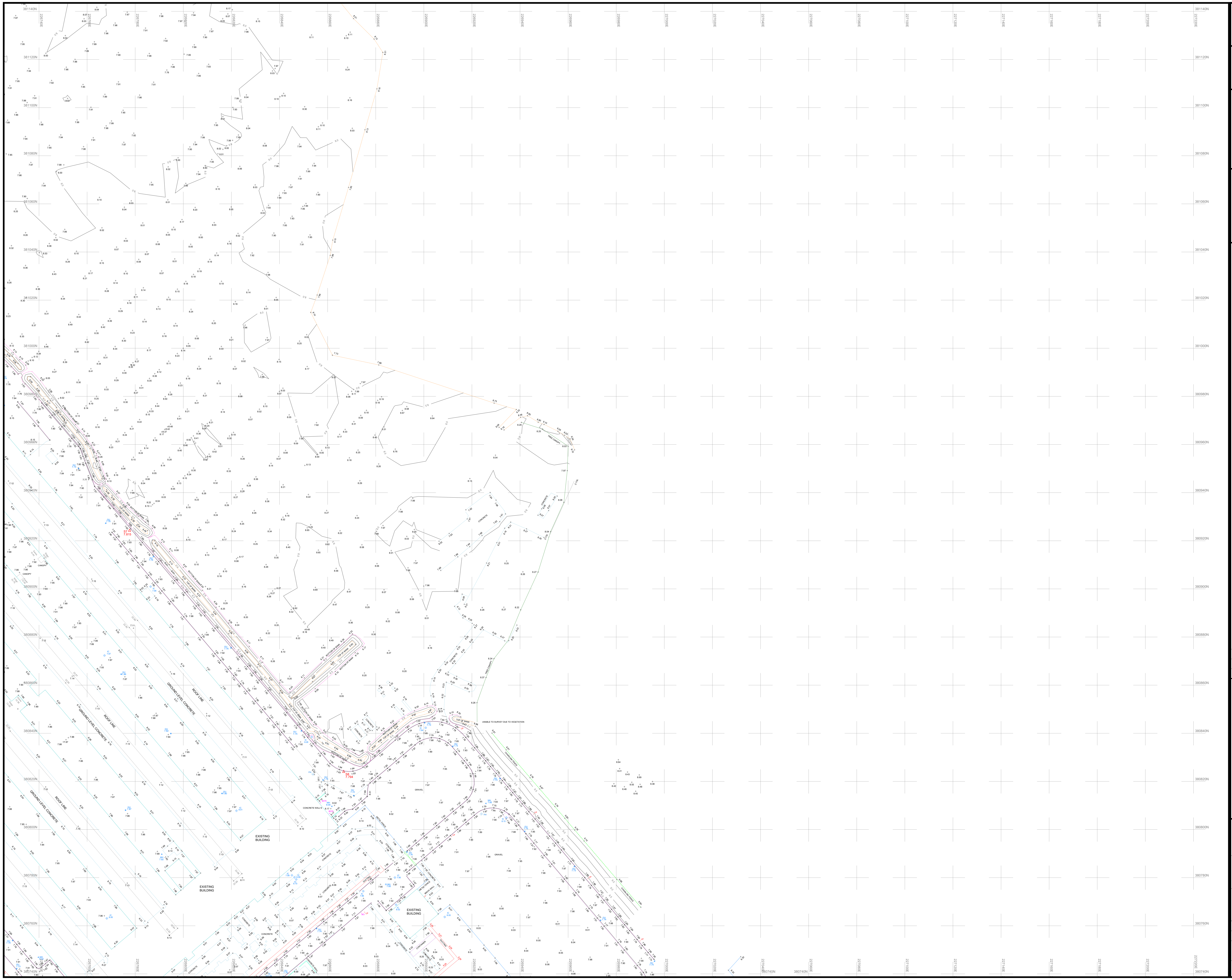
Client: Anglesey Holdings Limited

Site: Site off London Road, Holyhead.

Title: 3D Topographical Survey

Surveyed	CC, AT	Drawn	CC, AT, KW
Chk.	JM	Date	14/07/23
Scale [A0 Sheet]	1/500	DWG Ref (Layout No)	MIG_655_3DT(A0-L7)
Status	FINAL		
Job No	MIG_655	Rev	Ø



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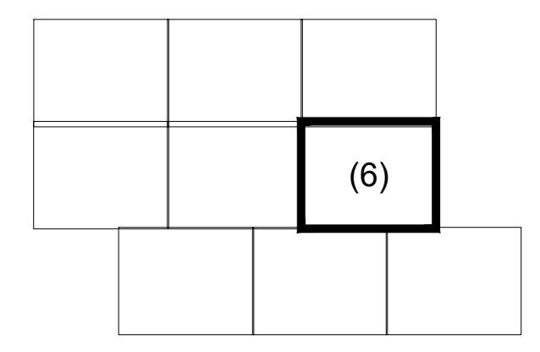
Direction
of North

Layout Key



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S6	226692.942	381023.762	7.799
S7	226777.645	380924.220	7.815
S8	226866.689	380824.004	7.794
S9	226984.129	380721.161	7.785
S10	226849.644	380601.734	7.820
S11	226683.798	380642.169	7.813
S12	226571.946	380669.044	7.816
S13	226436.522	380709.729	7.823
S14	226358.405	380791.042	7.766
S15	226250.305	380931.659	7.808
S10A	226986.990	380575.950	8.596
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S2B	226052.638	381207.392	7.587
S2C	225996.356	381387.779	6.035
S3A	226472.843	380926.409	8.160

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Rev	Date	Drawn	Description	Check
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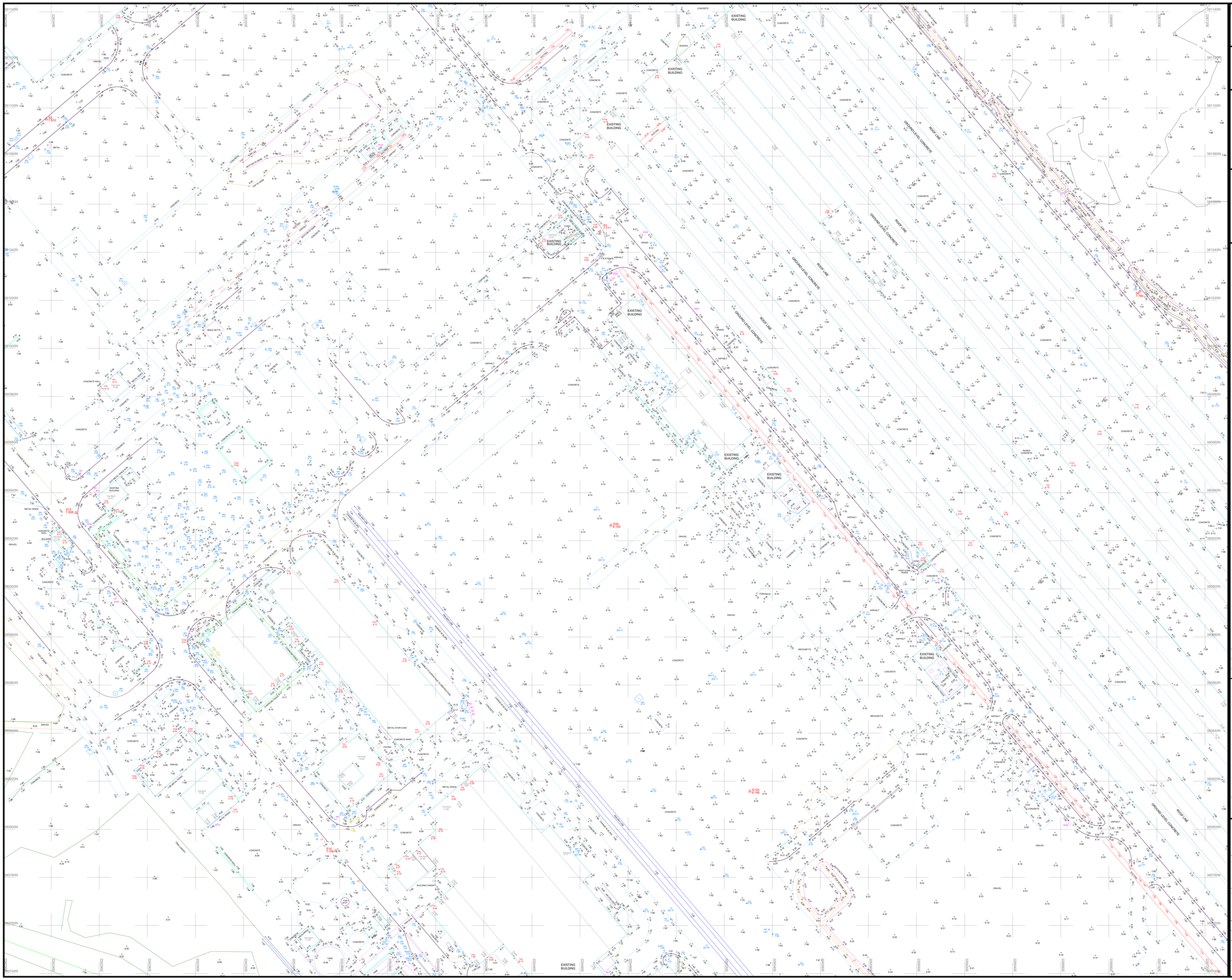
Scale [A0 Sheet]	DWG Ref (Layout No)	Status
1/500	MIG_655_3DT(A0-L6)	FINAL

Job No	Rev
MIG_655	0


EXISTING BUILDING
GROUND LEVEL CONCRETE
ROOF LINE
CONCRETE
ASPHALT
GRAVEL
METAL FENCE
POST & RAIL FENCE
BRICKSETTS
METAL STAIR CASE
CONCRETE BASE
PAVING
BUILDING CANOPY
RAISED CONCRETE
BRICK SETTS
CONCRETE WALL
BUILDING
Flat Roof
Pitch Roof
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381120N
381100N
381080N
381060N
381040N
381020N
381000N
380980N
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380920N
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227080E

Alan Wood & Partners

APPENDIX B

Site Parameters Plan

Application Site Boundary:
87.92ha / 217.25ac

Development Zones / Built Infrastructure:
66.20ha / 163.58ac

Will contain on-plot and other landscaping and planting, habitat enhancement and creation, drainage and other infrastructure including vehicular, cycle and walking access

Up to 238,000 sqm Class B1 and B8 (data centres only), plus battery energy storage (unique use);

Finished Floor Levels: Similar to existing ground levels of approximately 5 to 10m AOD.

Retained & Enhanced Green Infrastructure:
21.72ha / 53.67ac

Retained existing access from the A5

Secondary / emergency site access (existing)

Railway site access (existing)

Indicative areas of Tree Preservation Orders (TPO)

MoD / RAF Consultation Zones on Heights

Building Heights

Zone A: Max height up to 18m to ridge excluding point features

Zone B: Max height up to 21m to ridge excluding point features

N

Scale Bar
0m 100m 200m

FPCR Environment and Design Ltd, Lockington Hall, Lockington, Derby, DE74 2RH ■ t: 01509 672772 ■ f: 01509 674565 ■ e: mail@fpcr.co.uk ■ w: www.fpcr.co.uk
masterplanning ■ environmental assessment ■ landscape design ■ urban design ■ ecology ■ architecture ■ arboriculture

PROSPERITY PARC, ANGLESEY

Oxalis Planning

PARAMETERS PLAN

REV J
11906-L-05

November 2024

Alan Wood & Partners

APPENDIX C

Welsh Water Pre-Planning Enquiry Response

Dŵr Cymru
Welsh Water

PPA0008222

N
W E
S

LEGEND(Representative of most common features)

Waste network:

- Foul chamber
- Surface water chamber
- Combined chamber
- Combined sewer overflow
- Special purpose chamber
- Treatment works
- Pumping station
- Outfall
- Lamphole
- Storm Overflow
- Rising main
- Gravity sewer
- Private sewer
- Private sewer subject to Sect. 104 adoption agreement
- Private Sewer Transfer
- Lateral Drain
- Inspection Chamber

NB: Sewer symbol colour indicates the type.
RED - Combined
GREEN - Surface Water
BROWN - Foul
Purple - Former S24 sewers (for indicative purposes only)

Notes:

Whilst every reasonable effort has been taken to correctly record the pipe material of DCWW assets, there is a possibility that in some cases, pipe material (other than Asbestos Cement or Pitch Fibre) may be found to be asbestos cement (AC) or Pitch Fibre (PF) . It is therefore advisable that the possible presence of AC or PF pipes be anticipated and considered as part of any risk assessment prior to excavation

Map Ref:	226450,381013
Map scale:	1:1750
Printed by:	Alaw Jones
Printed on:	21 Sep 2023

Dŵr Cymru
Welsh Water

Developer Services
PO Box 3146
Cardiff
CF30 0EH

Tel: +44 (0)800 917 2652
Fax: +44 (0)2920 740472
E.mail: developer.services@dwrcymru.com

Gwasanaethau Datblygu
Blwch Post 3146
Caerdydd
CF30 0EH

Ffôn: +44 (0)800 917 2652
Ffacs: +44 (0)2920 740472
E.bost: developer.services@dwrcymru.com

Mr Harvey Dobson
Alan wood and Partners
341 Beverly Road
Hull
HU5 1LD

Date: 20/09/2023
Our Ref: PPA0008222

Dear Mr Dobson,

Grid Ref: 226377 381100
Site Address: Land at Penrhos, Holyhead, Anglesey
Development: Freeport

I refer to your pre-planning enquiry received relating to the above site, seeking our views on the capacity of our network of assets and infrastructure to accommodate your proposed development. Having reviewed the details submitted I can provide the following comments which should be taken into account within any future planning application for the development.

APPRAISAL

Firstly, we note that the proposal relates to a freeport on land at Penrhos, Holyhead and acknowledge that the site is allocated within the Local Development Plan (LDP) for employment use. We offer the following comments as part of our appraisal of this development.

PUBLIC SEWERAGE NETWORK

The proposed development site is located in the immediate vicinity of a predominantly combined public sewerage system which drains to Holyhead Wastewater Treatment Works (WwTW) via Penrhos Beach and Morawelon Sewerage Pumping Stations (SPSs).

This site is crossed by public sewers and rising mains with their approximate position being marked on the attached Statutory Public Sewer Record. In accordance with the Water Industry Act 1991, Dwr Cymru Welsh Water requires access to its apparatus at all times in order to carry out maintenance and repairs. No part of any building will be permitted within the protection zone of the public sewers and rising main measured 3 metres either side of the centreline of the public sewers and 5 metres either side of the centreline of the rising mains.

We would also advise that Holyhead WwTW as well as Penrhos Beach SPS is located within the red line boundary on the location plan submitted with the pre-planning advice enquiry. We would advise that

there is no permission to develop or alter the WwTW and SPS and they should be excluded from any red line plan submitted with any future applications.

We would also like to advise the developer that no habitable buildings be constructed within 50m of the WwTW and 15m of the SPS as to minimise any effects of noise and odour nuisance. Our strong recommendation is that your site layout takes into account the location of the assets crossing the site and should be referred to in any master-planning exercises or site layout plans submitted as part of any subsequent planning application.

In the first instance, it is recommended that a survey to ascertain the location of the assets is undertaken and establish their relationship to the proposed development. We would require to carry the survey work on the public rising mains and would recommend that you contact our colleagues at planandprotect@dwrcymru.com for a quotation for this service. Further information regarding Asset Protection is provided in the attached Advice & Guidance note as well as our Developer Services website, which offers guidance on building SuDS features over or near to our assets at https://developers.dwrcymru.com/en/help-advice/regulation-to-be-aware-of/sustainable-drainage-systems.

You are also advised that some public sewers and lateral drains may not be recorded on our maps of public sewers because they were originally privately owned and were transferred into public ownership by nature of the Water Industry (Schemes for Adoption of Private Sewers) Regulations 2011. The presence of such assets may affect the proposal. In order to assist you may contact Dwr Cymru Welsh Water on 0800 085 3968 to establish the location and status of the apparatus in and around your site. Please be mindful that under the Water Industry Act 1991 Dwr Cymru Welsh Water has rights of access to its apparatus at all times.

SURFACE WATER DRAINAGE

As of 7th January 2019, this proposed development is subject to Schedule 3 of the Flood and Water Management Act 2010. The development therefore requires approval of Sustainable Drainage Systems (SuDS) features, in accordance with the 'Statutory standards for sustainable drainage systems – designing, constructing, operating and maintaining surface water drainage systems'. As highlighted in these standards, the developer is required to explore and fully exhaust all surface water drainage options in accordance with a hierarchy which states that discharge to a combined sewer shall only be made as a last resort. Disposal should be made through the hierarchical approach, preferring infiltration and, where infiltration is not possible, disposal to a surface water drainage body in liaison with the Land Drainage Authority and/or Natural Resources Wales.

It is therefore recommended that the developer consult with Isle of Anglesey County Council, as the determining SuDS Approval Body (SAB), in relation to their proposals for SuDS features. Please note, DCWW is a statutory consultee to the SAB application process and will provide comments to any SuDS proposals by response to SAB consultation. Please refer to further detailed advice relating to surface water management included in our attached Advice & Guidance note and our Developer Services website

at https://developers.dwrcymru.com/en/help-advice/regulation-to-be-aware-of/sustainable-drainage-systems.

Due to capacity constraints with the public combined sewerage network, under no circumstances would we allow surface water runoff to communicate directly/indirectly with the public combined sewer.

In addition, please note that no highway or land drainage run-off will be permitted to discharge directly or indirectly into the public sewerage system.

FOUL WATER DRAINAGE – SEWERAGE NETWORK

We have considered the impact of foul flows generated by the proposed development and concluded that flows can be accommodated within the public sewerage system. We advise that the flows should be connected to the foul sewer at or downstream of manhole SH25818505 located to the northwest of the site.

Should a planning application be submitted for this development we will seek to control these points of communication via appropriate planning conditions and therefore recommend that any drainage layout or strategy submitted as part of your application takes this into account. However, should you wish for an alternative connection point to be considered please provide further information to us in the form of a drainage strategy, preferably in advance of a planning application being submitted.

You may need to apply to Dwr Cymru Welsh Water for any connection to the public sewer under Section 106 of the Water industry Act 1991. However, if the connection to the public sewer network is either via a lateral drain (i.e. a drain which extends beyond the connecting property boundary) or via a new sewer (i.e. serves more than one property), it is now a mandatory requirement to first enter into a Section 104 Adoption Agreement (Water Industry Act 1991). The design of the sewers and lateral drains must also conform to the Welsh Ministers Standards for Foul Sewers and Lateral Drains, and conform with the publication "Sewers for Adoption"- 7th Edition. Further information can be obtained via the Developer Services pages of www.dwrcymru.com

If the development will give rise to a new discharge (or alter an existing discharge) of trade effluent, directly or indirectly to the public sewerage system, then a Discharge Consent under Section 118 of the Water Industry Act 1991 is required from Dwr Cymru / Welsh Water. Please note that the issuing of a Discharge Consent is independent of the planning process and a consent may be refused although planning permission is granted.

SEWAGE TREATMENT

No problems are envisaged with the Waste Water Treatment Works for the treatment of domestic discharges from this site from 500 employees.

If the development will give rise to a new discharge (or alter an existing discharge) of trade effluent, directly or indirectly to the public sewerage system, then a Discharge Consent under Section 118 of the

Water Industry Act 1991 is required from Dwr Cymru / Welsh Water. Please note that the issuing of a Discharge Consent is independent of the planning process and a consent may be refused although planning permission is granted.

POTABLE WATER SUPPLY

We anticipate this development will require the installation of a new single water connection to serve the new premise. The provisions of Section 45 of the Water industry Act 1991 apply. We therefore rely on the Local Planning Authority to control the delivery of any required reinforcement or offsite works by way of planning condition at planning application stage.

The water supply system in the immediate vicinity has insufficient capacity to serve the development and will also cause detriment to existing customers' water supply. A hydraulic modelling assessment is required to establish the scope of any reinforcement works to be completed in advance of making the connection. As part of the formal planning consultation process, we will seek to ensure that the assessment (and any associated reinforcement works) is completed in advance of the determination of the application or controlled by way of planning condition.

Information relating to our Hydraulic Modelling Assessment process is available on our website and within our guidance notes. The area planning officer will also be able to provide you within information relating to this process.

I trust the above information is helpful and will assist you in forming water and drainage strategies that should accompany any future planning application. I also attach copies of our water and sewer extract plans for the area, and a copy of our Planning Guidance Note which provides further information on our approach to the planning process, making connections to our systems and ensuring any existing public assets or infrastructure located within new development sites are protected.

Please note that our response is based on the information provided in your enquiry and should the information change we reserve the right to make a new representation. Should you have any queries or wish to discuss any aspect of our response please do not hesitate to contact our dedicated team of planning officers, either on 0800 917 2652 or via email at **developer.services@dwrcymru.com**

Please quote our reference number in all communications and correspondence.

Yours faithfully,

Owain George
Planning Liaison Manager
Developer Services

<u>Please Note</u> that demands upon the water and sewerage systems change continually; consequently the information given above should be regarded as reliable for a maximum period of 12 months from the date of this letter.

Alan Wood & Partners

Hull Office	**Leeds Office**	**Lincoln Office**
(Registered Office)	18 Howley Park Business Village	Unit H
341 Beverley Road	Pullan Way	The Quays
Hull	Leeds	Burton Waters
HU5 1LD	LS27 0BZ	Lincoln LN1 2XG
Telephone	**Telephone**	**Telephone**
01482.442138	0113. 5311098	01522.300210
Scarborough Office	**Sheffield Office**	**York Office**
Kingsley House	Hallamshire House	Omega 2
7 Pickering Road	Meadow Court	Monks Cross Drive
West Ayton	Hayland Street	York
Scarborough YO13 9JE	Sheffield S9 1BY	YO32 9GZ
Telephone	**Telephone**	**Telephone**
01723.865484	01142.440077	01904 611594
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eng@alanwood.co.uk	www.alanwood.co.uk	

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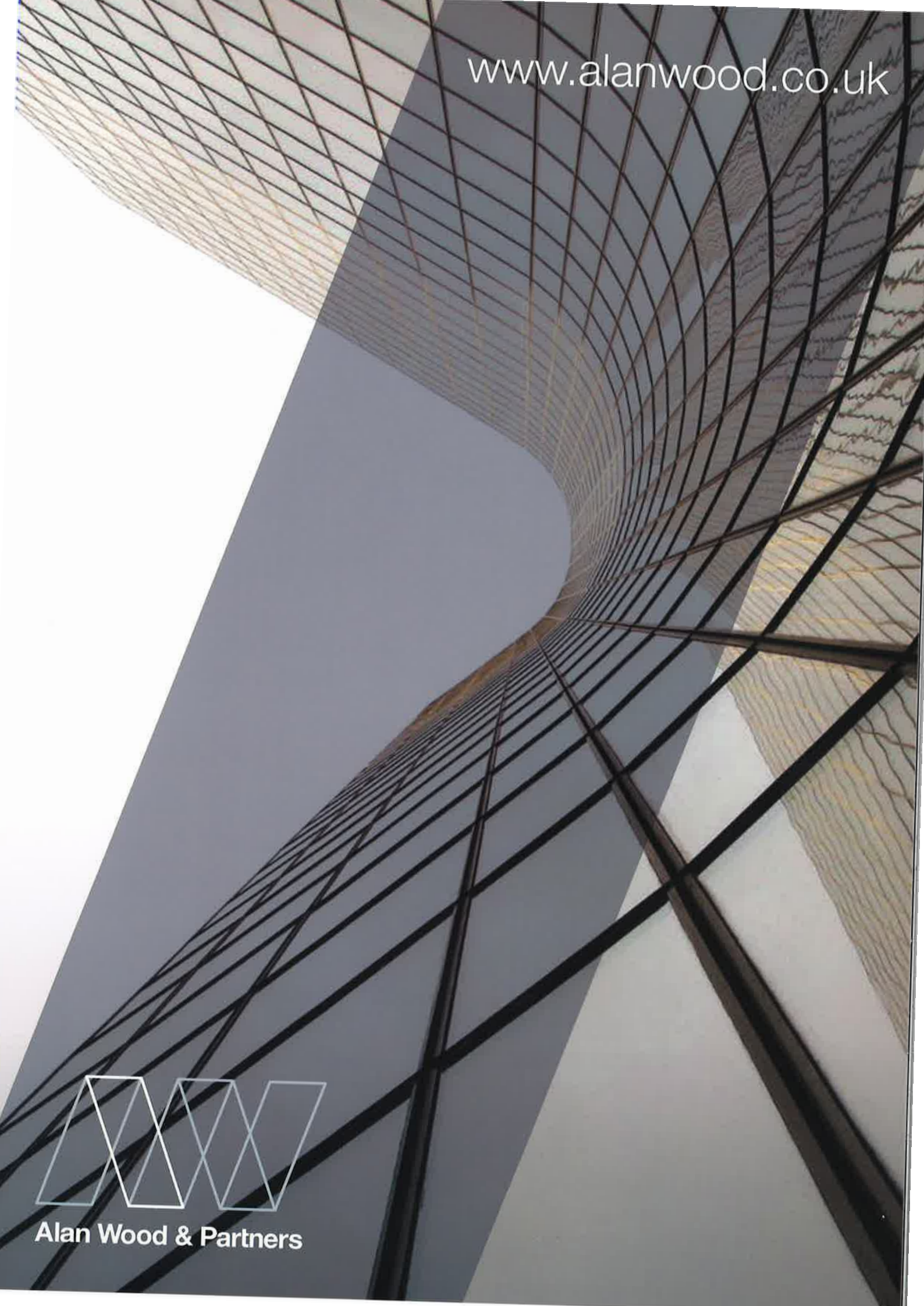
Quality Assurance Accreditation
ISO 9001 Registered firm
Certificate no. GB.02/07

Environmental Accreditation
ISO 14001Registered firm Certificate no.
GB.09/277b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