

Proposal: 29 Unit Housing Development

Address: Housing Development on land adj. Ty Hapus, Cwm Road, Llandudno

Initial Drainage Strategy:
Rev B

Existing drainage

1. The site has no former usage other than hardstanding play area thus there is no existing drainage serving the site itself.
2. There is an existing 225mm diameter foul sewer network adjacent to the western side of the site within the grass verge along Cwm Road, which flows from north to south.
3. There is a surface water sewer running parallel with the existing foul sewer along the western side of the proposed site, between cwm road and the existing foul sewer.
4. The natural ground profile of the site is level across the entirety of the site.
5. There are highway gullies within the existing Cwm Road, connecting into the foul sewer. There are also highway gullies presumably connecting to the surface water sewer running along Ffordd Penrhyn.

Foul

1. A PPA application (**PPA0008840**) was made to DCWW July 2024 in relative to the proposed development of 29 units. The response received 22/07/24 stated that there were no concerns relative to the sewerage network nor treatment works to receive the flows from the development. A preferred connection point was suggested at chamber SH78814504 which lies immediately southwest of our site on the Cwm Road and Ffordd Penrhyn Junction, roughly 6m from our site boundary.
2. The onsite foul will be drained from the north to south of the site. This will be offered for S104 adoption following detailed design.
3. Given we will be slightly raising the level of the site, a gravity connection to the existing sewer should be achievable, with the existing chamber being in excess of 3m deep.

Surface Water

Disposal of surface water is summarised as follows:

1. Porosity testing has been carried out by Groundsolve Ltd on 17/12/2024. The testing proved that the ground is not suitable for infiltration due to the clay material encountered. Groundwater was encountered at approx. 2.2- 2.5m depth where the material changed to gravelly sand.
2. As infiltration is deemed to be unfeasible, a discharge rate has been determined based on the mean annual peak flow (Qbar) which is 3.6l/s rising to 7.8l/s for the 1in100 year event. SAB / LLFA were contacted for consideration to enable more thorough SAB pre-application to be made for the site in due course and the proposed rate has been accepted.

3. DCWW confirmed the existing surface water network has sufficient capacity downstream of the proposed connection point at chamber SH78814503, which ultimately discharges to the sea at a distance of 1.5km from our site.
4. The proposals will also look to incorporate various SUDS features in order to meet water quality, amenity and biodiversity requirements, using a raingarden serving a portion of the proposed access road along with waterbutts. Parking bays will consist of porous paving where possible.

Supporting Information References

- PPA0008840 22.07.24
- PPA0008639 Sewer Plan
- SAB and DCWW agreement on SW discharge rate
- 24168 SK501P3 Proposed Drainage Scheme
- Preliminary S.I Information- logs and correspondence.



Dŵr Cymru
Welsh Water

Developer Services
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Cardiff
CF30 0EH

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E.bost: developer.services@dwrwymru.com

Mr Phillip Evans
Datrys
Broncoed House
Suite 4A
Wrexham Road
Mold
Flintshire
CH7 1HP

Date: 22/07/2024
Our Ref: PPA0008840

Dear Mr Evans

Grid Ref: 278476 381614
Site Address: Cwm Road, Llandudno
Development: 29 units Housing development

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 29 unit housing development at Cwm Road and acknowledge that the site comprises of a potential windfall development with no allocated status in the Local Development Plan (LDP). Accordingly, whilst it does not appear an assessment has been previously undertaken of the public sewerage and watermains systems, 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 mixed sewerage system, comprising combined, foul and surface water public sewers, which drains to Ganol Wastewater Treatment Works (WwTW).

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.



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Mae Dŵr Cymru yn eiddo i Glas Cymru – cwmni 'nid-er-elw'.

We welcome correspondence in
Welsh and English

Dŵr Cymru Cyf, a limited company registered in
Wales no 2366777. Registered office: Pentwyn Road,
Nelson, Treharris, Mid Glamorgan CF46 6LY

Rydym yn croesawu gohebiaeth yn y
Gymraeg neu yn Saesneg

Dŵr Cymru Cyf, cwmni cyfyngedig wedi'i gofrestru yng
Nghymru rhif 2366777. Swyddfa gofrestredig: Heol Pentwyn
Nelson, Treharris, Morgannwg Ganol CF46 6LY.

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 Conwy 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.

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 combined sewer between manholes SH78814603 and SH78814504 located to the west. 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.



Foul Water Drainage – Sewage Treatment

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

Potable Water Supply

Capacity is currently available in the water supply system to accommodate the development. Initial indications are that a connection can be made from the '4" AC diameter watermain in 'Grid 278449,381571'. We reserve the right however to reassess our position as part of the formal application for the provision of new water mains under Section 41 and Section 51 of the Water Industry Act (1991) to ensure there is sufficient capacity available to serve the development without causing detriment to existing customers' supply as demands upon our water systems change continually.

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

Please Note 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.



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Rydym yn croesawu gohebiaeth yn y
Gymraeg neu yn Saesneg

Dŵr Cymru Cyf, cwmni cyfyngedig wedi'i gofrestru yng
Nghymru rhif 2366777. Swyddfa gofrestredig: Heol Pentwyn
Nelson, Treharris, Morgannwg Ganol CF46 6LY.



LEGEND(Representative of most common features)

- | | | |
|-------------------------|---|------------------------|
| Foul chamber | Surface water chamber | Outfall |
| Combined chamber | Combined sewer overflow | Storm Overflow |
| Special purpose chamber | Treatment works | Rising main |
| Pumping station | Former S24 sewers (for indicative purposes only) | 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:

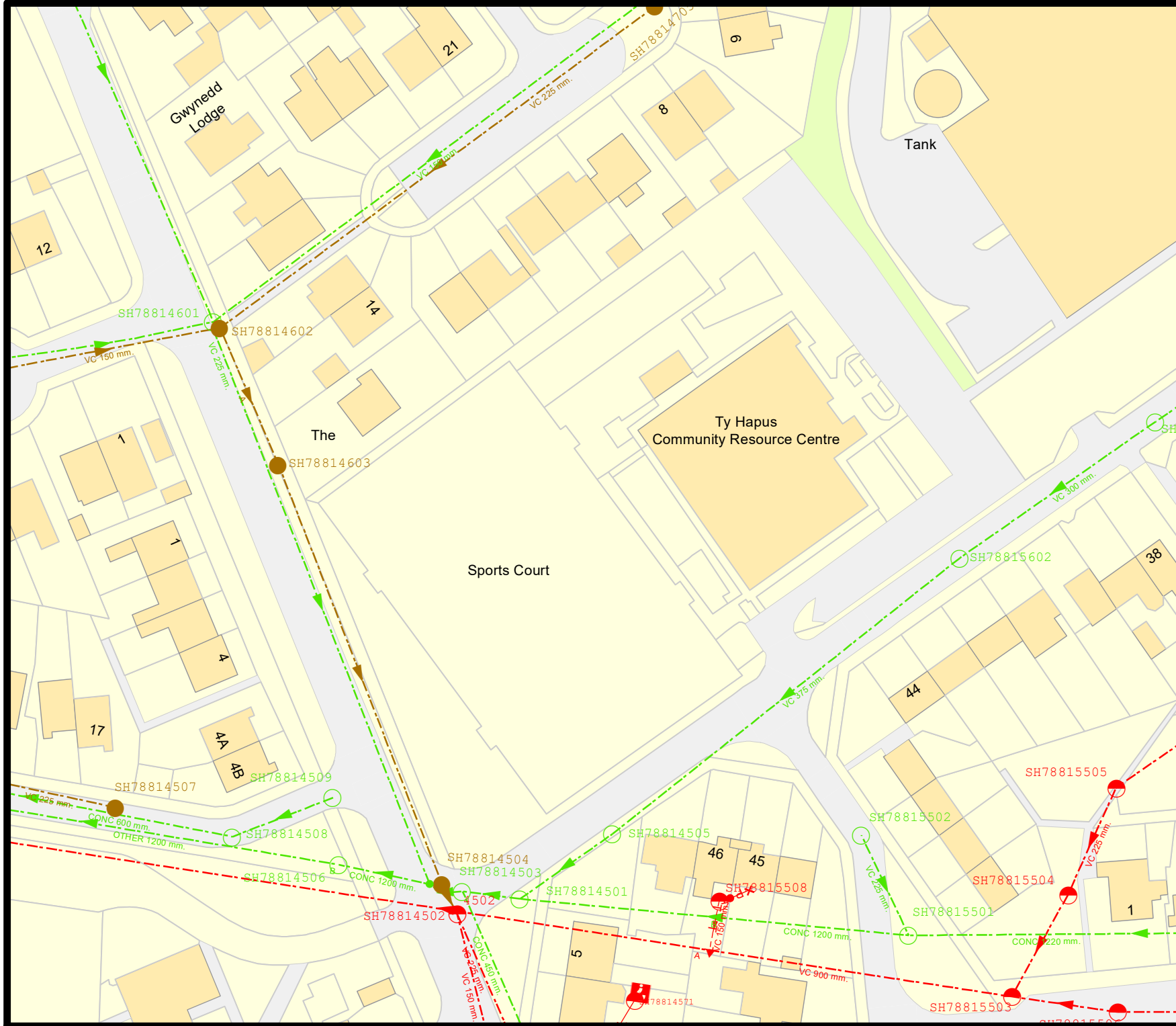
Whilst every reasonable effort has been taken to correctly record the pipe material of DCNW assets, there is a possibility that in some cases pipe material (other than Asbestos Cement or Pitch Fibre) may be found to be asbestos cement (AC) or Pitch Fibre (PF). It is therefore advisable that the possible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

Dŵr Cymru Cynnyddig (the Company) gives this information as to the position of its underground apparatus by way of general guidance only and on the understanding that it is based on the best information available and no warranty as to its correctness is relied upon in the event of excavations or other works made in the vicinity of the company's apparatus. This level of warning applies before carrying out any excavations made outside its site. The information which is supplied by the Company is done so in accordance with statutory requirements of sections 105 and 109 of the Water Industry Act 1991 unless it is stated otherwise. The information is given as a guide only and is not intended to be used as a basis for any legal proceedings. If any person is injured or damaged as a result of any excavation made outside its site, the Company will not be liable for any such injury or damage. The Company's liability is limited to the extent permitted by law. The Company's liability is limited to the extent permitted by law. The Company's liability is limited to the extent permitted by law.

EXACT LOCATIONS OF ALL APPARATUS TO BE DETERMINED ON SITE.

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Map Ref: 278482,381619
 Map scale: 1:850
 Printed by: Stacey Harris
 Printed on: 22 Jul 2024



Levente Incze

From: SAB <sab@conwy.gov.uk>
Sent: 10 January 2025 15:30
To: Levente Incze
Subject: RE: New development adjacent Ty Hapus, Cwm Road, Llandudno [Filed 10 Jan 2025 16:08]

Categories: Filed by Mail Manager

Good Afternoon Levente,

Thank for the email. Apologies for the delay in response.

I have reviewed the below and can confirm my acceptance of discharge rates restricted to QBAR for the site. However, I have just ran the site through the HR Wallingford Greenfield Run-off tool and the 1 in 100 year comes to 7.85?

Site characteristics

Total site area (ha) ?

Hydrological characteristics

These data come from the click on the map. The values on the left can be edited.

| | My values | Map values |
|--|-----------------------------------|-----------------------------------|
| SAAR (mm) ? | <input type="text" value="855"/> | <input type="text" value="855"/> |
| Hydrological region ? | <input type="text" value="9"/> | <input type="text" value="9"/> |
| Growth curve factors ? | | |
| Growth curve factor 1 | <input type="text" value="0.88"/> | <input type="text" value="0.88"/> |
| Growth curve factor 30 | <input type="text" value="1.78"/> | <input type="text" value="1.78"/> |
| Growth curve factor 100 | <input type="text" value="2.18"/> | <input type="text" value="2.18"/> |
| Growth curve factor 200 | <input type="text" value="2.46"/> | <input type="text" value="2.46"/> |

Levente Incze

From: Jake MacMillan <Jake.MacMillan@dwrcymru.com>
Sent: 03 January 2025 15:39
To: Levente Incze
Cc: Adam Caldwell
Subject: RE: PPA0008840- New development adjacent Ty Hapus, Cwm Road, Llandudno [Filed 03 Jan 2025 15:49]

Categories: Filed by Mail Manager

Hi Levente,

In principle this would be acceptable, however it is dependent on the SAB's view as to whether the sustainable drainage hierarchy has been sufficiently exhausted, which we would take their views on during the SAB application.

Best regards,



Jake MacMillan

Development Planning Officer | Developer Services
Dŵr Cymru Welsh Water



T: 0800 917 2652 | E: 45xxx | M: +442922784445



W: dwrcymru.com



A: PO Box 3146, Cardiff, CF30 0EH



E: developer.services@dwrcymru.com

If we've gone the extra mile to provide you with excellent service, let us know. You can nominate an individual or team for a Diolch award through our [website](https://www.dwrcymru.com/en/Diolch-Awards.aspx).

From: Levente Incze <l.incze@datrys.coop>
Sent: 03 January 2025 15:17
To: Services Developer <developer.services@dwrcymru.com>
Cc: Adam Caldwell <a.caldwell@datrys.coop>
Subject: PPA0008840- New development adjacent Ty Hapus, Cwm Road, Llandudno

***** External Mail *****

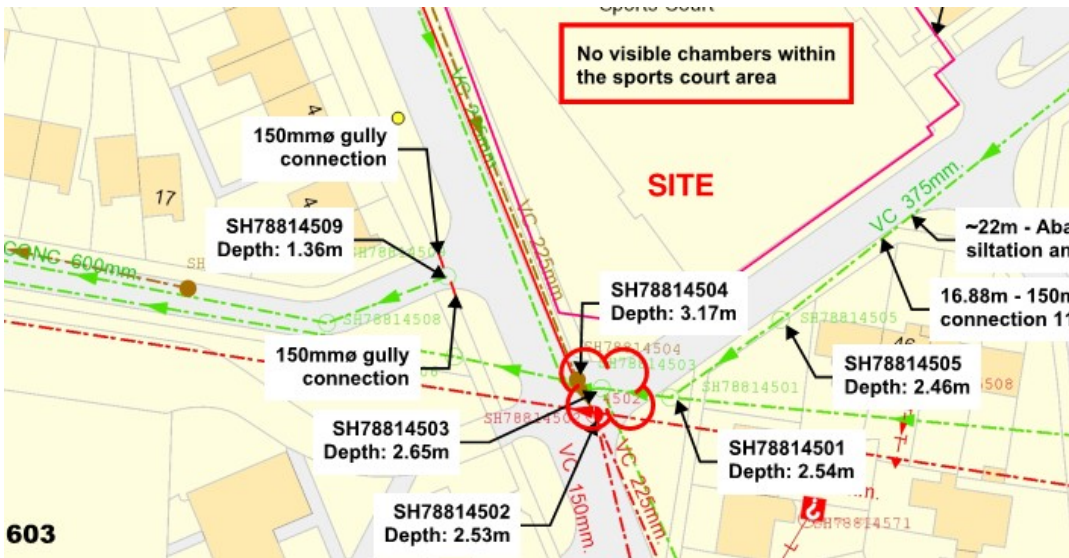
Good afternoon,

Further to our previous pre planning application (advice attached for clarity) I am contacting you in regards of this social housing development (a total of 29 units split into 22 apartments and 7 houses) at Cwm Road, Llandudno, Conwy to query about the adjacent surface water network capacity. See attached site layout for clarity.

A site investigation has been carried out on the 17th of December 2024 to test the permeability of the ground. Unfortunately, the testing did not yield permeability result due to the low permeability of the clay material encountered until the depth of around 2.2-2.4m.

We contacted SAB to agree that the hierarchy have been followed and to agree on a proposed discharge rate.

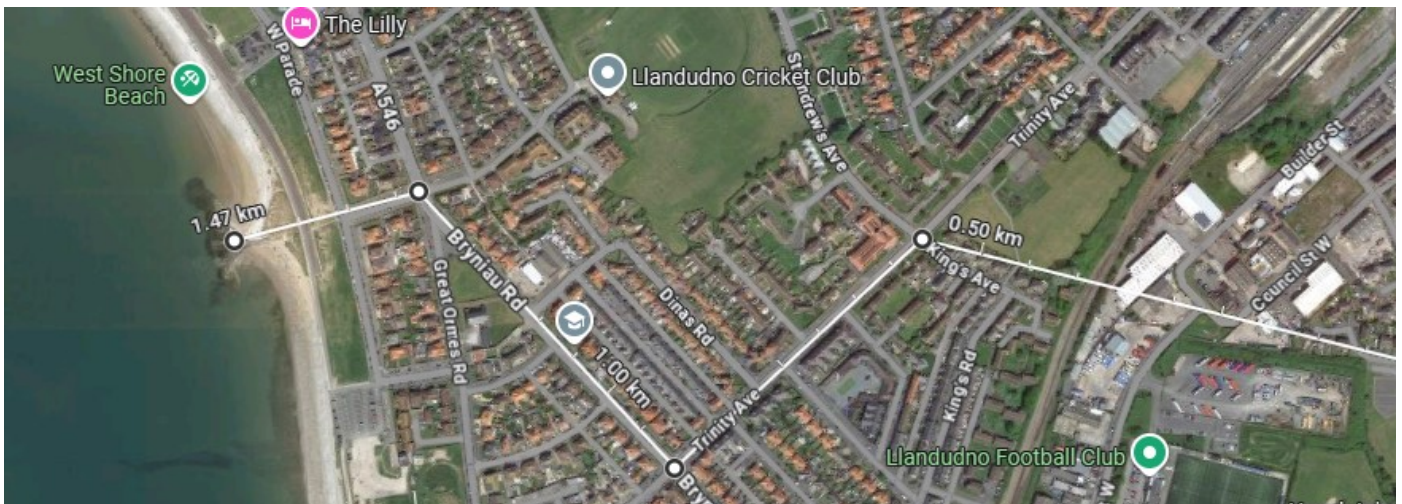
As there are no watercourses in the vicinity of the site we are proposing to discharge the surface water with a reduced rate to the nearby surface water system. A CCTV survey have been carried out, but an existing connection from our site couldn't be identified. Based on the findings we are proposing to connect at chamber SH78814503 (highlighted below).



In line with the CIRIA guidance based on the contributing area only the mean annual greenfield peak flow (Q_{bar}) has been calculated to be 3.6l/s rising to 8.9l/s for the 1 in 100 year event. Therefore, we propose a discharge rate of 3.6l/s for the 1in2 year event, rising to 8.6l/s for the threshold design event (1 in 100 year).

The attenuation will be designed for the 1 in 100 year + 30% climate change allowance allowing for 10% urban creep.

The surface water drainage discharges to the sea at West Shore Beach across Lloyd Street (see below screengrab of the approx. route).



If you could confirm whether the above-mentioned surface water network have enough capacity to cater our proposed flow rate that would be much appreciated.

If you have further queries or anything is unclear, please don't hesitate to contact me.

Regards,

Levente Incze

Project Civil Engineer

C'fon: 01286 671027 | **Mold:** 01352 706205

E: l.incze@datrys.coop | www.datrys.net

Suite 1, Block C, Doc Fictoria, Caernarfon, Gwynedd LL55 1TH



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WATERBUTTS AND RAINGARDENS/SUDS PLANTERS TO BE USED AT RAINWATER DOWNPIPES



NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECT'S, ENGINEER'S AND OTHER SPECIALISTS' DRAWINGS.
2. PLEASE REFER TO ARCHITECTS DRAWINGS FOR FINAL BUILDING LOCATION
3. ALL DRAINAGE COMPONENTS ARE TO COMPLY WITH CURRENT BRITISH STANDARDS & BUILDING REGULATIONS REQUIREMENTS



KEY

- SITE BOUNDARY
- ASSUMED LINE OF EXISTING FOUL SEWER
- ASSUMED LINE OF EXISTING COMBINED SEWER
- ASSUMED LINE OF EXISTING SURFACE WATER SEWER
- PROPOSED FOUL CHAMBER AND SEWER
- PROPOSED SURFACE WATER CHAMBER AND SEWER
- PROPOSED LAND DRAIN CHAMBER AND PIPE
- PROPOSED PERMEABLE PAVING
- PROPOSED IMPERMEABLE PAVING
- PROPOSED RAINGARDEN
- PROPOSED HYDROPLANTER
- PROPOSED ATTENUATION STORAGE

| REV | DATE | DESCRIPTION | BY | CHK | APP |
|-----|----------|------------------------------|----|-----|-------|
| P3 | 12.03.25 | LAYOUT AMENDED | | LI | AC AC |
| P2 | 14.01.24 | SURFACE WATER LAYOUT AMENDED | | LI | AC AC |

REVISIONS

PRELIMINARY ISSUE

CLIENT
 Grŵp Cynefin

PROJECT
 Housing Development adj.
 Ty Hapus,
 Llandudno

TITLE
 Drainage Scheme

DATRY'S
 Camarfon: Unit 1, Bink C, Doc Victoria, Camarfon, LL55 1TH, Tel: 01352 671027
 Mold: Suite 4A, Bronzed House, Wrexham Road, Mold, CH7 5HP, Tel: 01352 706205, info@datrys.coop | www.datrys.net

| | | |
|-------------------|--------------------------|------------|
| DRAWN LG | CHECKED LI | PASSED EPW |
| DATE 05.09.24 | DATRY'S REF. | |
| SCALE AT A1 1:250 | AUTOCAD REF. 24168/SK501 | |

| | |
|-------------|----------|
| DRAWING No. | REVISION |
| 24168/SK501 | P3 |

Levente Incze

From: Alex Ridge <alexridge@groundsolve.com>
Sent: 20 December 2024 16:59
To: Levente Incze; Sam Fishburne
Cc: Paul Williams; Adam Caldwell
Subject: RE: TY Hapus Phase 2 SI [Filed 08 Jan 2025 10:12]
Attachments: GSL3222 TP Soakaway Calculation.pdf; 3222 Ty Hapus Logs.pdf

Categories: Filed by Mail Manager

Afternoon All,

Please see attached draft field logs as well as permeability results from the BRE 365 testing.

The testing did not yield permeability values due to the low permeability of the clay material encountered, however underlying the clay, gravelly sand was encountered which would yield better results, at a depth of around 2.20m onward. Due to the unstable nature of this material however, BRE testing was not feasible in this material.

As such, we can offer falling/rising head permeability tests to be conducted during the gas monitoring visits to infer a permeability value for this material.

Regarding ground conditions, the site generally shows very low strength clays with Cu values between 1.00m to 3.00m mostly ranging between 10kN and 40kN with loose granular deposits beyond feasible depth for shallow foundations, unless ground improvement techniques are implemented. An alternative solution would be deeper piles or micro piles, in either case however deeper boreholes would be required.

This summarises the initial findings however final recommendations will be offered in the final report.

If required and on approval of a quote, we can mobilise to site in the new year to undertake deeper boreholes.

I am on annual leave from today onwards however myself and Sam will be monitoring urgent or important emails over the festive period so please get in touch if you have any queries.

Alex Ridge
BSc (Hons) FGS GMICE
Graduate Geotechnical Engineer



Unit 1, Well House Barns, Chester Rd,
Bretton, Chester CH4 0DH

☎: D: 01244 952 295

☎: T: 01244 952 295

📞: 07538 441555

✉: alexridge@groundsolve.com

🌐: www.groundsolve.com

| | | | | | |
|--|---------------------|-------------------------|-----------------|--------------------------------|-----------------------------|
| Project Name: Ty Hapus,Llandudno | | Client: Datrys | | Date: 17/12/2024 | |
| Location: Ffordd Penrhyn, Llandudno LL30 1HB | | Contractor: GroundSolve | | Co-ords: E278487.59 N381631.14 | |
| Project No. : 3222 | | Crew Name: | | Equipment: ECR580 | |
| Location Number SA101 | Location Type TP | Level | Logged By AR | Scale 1:25 | Page Number Sheet 1 of 1 |

| Backfill/ Instal'n | Water Strikes | Sample and In Situ Testing | | | Depth (m) | Level (m) | Legend | Stratum Description |
|----------------------------|------------------|----------------------------|------|---------|--------------|--------------|--|---------------------|
| | | Depth (m) | Type | Results | | | | |
| | | 0.10 | B | | 0.05 | | Concrete slab (MADE GROUND) | |
| | | 0.30 | ES | | 0.15 | | Loose slightly sandy subangular to subrounded fine to coarse GRAVEL of mixed lithologies (subbase) (TIDAL FLAT DEPOSITS) | |
| | | | | | 1.50 | | Soft dark grey sandy slightly gravelly CLAY. Gravels are subangular to subrounded fine to coarse of siltstone and mudstone. (TIDAL FLAT DEPOSITS) | |
| End of Trial Pit at 1.500m | | | | | | | | |

DRAFT

| Dimensions | | Trench Support and Comment | | | Pumping Data | | |
|------------|-----------|----------------------------|--------------|---------|--------------|------|---------|
| Pit Length | Pit Width | Pit Stability | Shoring Used | Remarks | Date | Rate | Remarks |
| 1.50 | 0.45 | Stable | | | | | |

| | |
|---------|--|
| Remarks | GroundSolve Ltd Unit 1 Well House Barns Chester Road Bretton CH4 0DH |
|---------|--|

| | | | | | |
|--|---------------------|-------------------------|-----------------|--------------------------------|-----------------------------|
| Project Name: Ty Hapus,Llandudno | | Client: Datrys | | Date: 17/12/2024 | |
| Location: Ffordd Penrhyn, Llandudno LL30 1HB | | Contractor: GroundSolve | | Co-ords: E278441.60 N381584.52 | |
| Project No. : 3222 | | Crew Name: | | Equipment: ECR580 | |
| Location Number SA102 | Location Type TP | Level | Logged By AR | Scale 1:25 | Page Number Sheet 1 of 1 |

| Backfill/ Instal'n | Water Strikes | Sample and In Situ Testing | | | Depth (m) | Level (m) | Legend | Stratum Description | | |
|-----------------------|------------------|----------------------------|--------------|---------|--------------|--------------|--------|---|---|---|
| | | Depth (m) | Type | Results | | | | | | |
| | | | | | 0.05 | | | Concrete slab (MADE GROUND) | 1 | |
| | | | | | 0.20 | | | Loose slightly sandy subangular to subrounded fine to coarse GRAVEL of mixed lithologies (subbase) (MADE GROUND) | | |
| | | | 1.00 | PP | 60.0kPa | | | | | Firm grey sandy slightly gravelly CLAY. Gravels are subangular to subrounded fine of siltstone and mudstone. (TIDAL FLAT DEPOSITS) |
| | | | 1.50 1.60 | B PP | 50.0kPa | 1.60 | | | | End of Trial Pit at 1.600m |
| | | | | | | | | | 2 | |
| | | | | | | | | | 3 | |
| | | | | | | | | | 4 | |
| | | | | | | | | | 5 | |

DRAFT

| | | | | | | | |
|--------------------|-------------------|----------------------------|--------------|---------|--------------|------|---------|
| Dimensions | | Trench Support and Comment | | | Pumping Data | | |
| Pit Length 1.10 | Pit Width 0.45 | Pit Stability Stable | Shoring Used | Remarks | Date | Rate | Remarks |
| | | | | | | | |

| | |
|---------|--|
| Remarks | GroundSolve Ltd Unit 1 Well House Barns Chester Road Bretton CH4 0DH |
|---------|--|

| | | | | | |
|--|---------------------|-------------------------|-----------------|--------------------------------|-----------------------------|
| Project Name: Ty Hapus,Llandudno | | Client: Datrys | | Date: 17/12/2024 | |
| Location: Ffordd Penrhyn, Llandudno LL30 1HB | | Contractor: GroundSolve | | Co-ords: E278423.34 N381618.38 | |
| Project No. : 3222 | | Crew Name: | | Equipment: ECR580 | |
| Location Number SA103 | Location Type TP | Level | Logged By AR | Scale 1:25 | Page Number Sheet 1 of 1 |

| Backfill/ Instal'n | Water Strikes | Sample and In Situ Testing | | | Depth (m) | Level (m) | Legend | Stratum Description | |
|-----------------------|------------------|----------------------------|------|---------|--------------|--------------|---|---------------------|--|
| | | Depth (m) | Type | Results | | | | | |
| | | 0.08 | B | | 0.05 | | Concrete slab (MADE GROUND) | 1 | |
| | | | | | 0.20 | | Loose slightly sandy subangular to subrounded fine to coarse GRAVEL of mixed lithologies (subbase) (MADE GROUND) | | |
| | | | | | | | Firm grey sandy slightly gravelly CLAY. Gravels are subangular to subrounded fine to coarse of siltstone and mudstone. (TIDAL FLAT DEPOSITS) | | |
| | | 1.00 | PP | 50.0kPa | | | | 2 | |
| | | 2.00 | PP | 50.0kPa | 2.00 | | End of Trial Pit at 2.000m | 3 | |
| | | | | | | | | 4 | |
| | | | | | | | | 5 | |

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| Dimensions | | Trench Support and Comment | | | Pumping Data | | |
|------------|-----------|----------------------------|--------------|---------|--------------|------|---------|
| Pit Length | Pit Width | Pit Stability | Shoring Used | Remarks | Date | Rate | Remarks |
| 1.20 | 0.45 | Stable | | | | | |

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|---------|--|
| Remarks | GroundSolve Ltd Unit 1 Well House Barns Chester Road Bretton CH4 0DH |
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|--|---------------------|-------------------------|-----------------|--------------------------------|-----------------------------|
| Project Name: Ty Hapus,Llandudno | | Client: Datrys | | Date: 17/12/2024 | |
| Location: Ffordd Penrhyn, Llandudno LL30 1HB | | Contractor: GroundSolve | | Co-ords: E278428.18 N381605.98 | |
| Project No. : 3222 | | Crew Name: | | Equipment: ECR580 | |
| Location Number TP101 | Location Type TP | Level | Logged By AR | Scale 1:25 | Page Number Sheet 1 of 1 |

| Backfill/ Instal'n | Water Strikes | Sample and In Situ Testing | | | Depth (m) | Level (m) | Legend | Stratum Description | |
|---------------------------|------------------|----------------------------|--------------|----------|--------------|--------------|---|--|---|
| | | Depth (m) | Type | Results | | | | | |
| | | | | | 0.05 | | Concrete slab (MADE GROUND) | | |
| | | | | | 0.20 | | Loose slightly sandy subangular to subrounded fine to coarse GRAVEL of mixed lithologies (sub base) | | |
| | | | 0.35 | B | | | | | |
| | | | 0.40 | ES | | | | | |
| | | | 0.60 | B | | | | | |
| | | | 1.00 | PP | 50.0kPa | 0.90 | | Firm grey sandy CLAY. (TIDAL FLAT DEPOSITS) | 1 |
| | | | 1.20 1.20 | B ES | | | | | |
| | | 2.00 | B | | | | | 2 | |
| | | 2.00 | PP | 100.0kPa | | | | | |
| | | 2.20 | PP | 25.0kPa | 2.20 | | | | |
| End of Trial Pit at 2.20m | | | | | | | | | |
| | | | | | | | | 3 | |
| | | | | | | | | 4 | |
| | | | | | | | | 5 | |

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| Dimensions | | Trench Support and Comment | | | Pumping Data | | |
|------------|-----------|----------------------------|--------------|---------|--------------|------|---------|
| Pit Length | Pit Width | Pit Stability | Shoring Used | Remarks | Date | Rate | Remarks |
| 1.50 | 0.45 | Stable | | | | | |

Remarks

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Unit 1 Well House Barns
Chester Road
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CH4 0DH

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|--|---------------------|-------------------------|-----------------|--------------------------------|-----------------------------|
| Project Name: Ty Hapus,Llandudno | | Client: Datrys | | Date: 17/12/2024 | |
| Location: Ffordd Penrhyn, Llandudno LL30 1HB | | Contractor: GroundSolve | | Co-ords: E278471.90 N381624.05 | |
| Project No. : 3222 | | Crew Name: | | Equipment: ECR580 | |
| Location Number TP102 | Location Type TP | Level | Logged By AR | Scale 1:25 | Page Number Sheet 1 of 1 |

| Backfill/Instal'n | Water Strikes | Sample and In Situ Testing | | | Depth (m) | Level (m) | Legend | Stratum Description | |
|-------------------|---------------|----------------------------|------|---------|-----------|-----------|--|--|---|
| | | Depth (m) | Type | Results | | | | | |
| | | | | | 0.05 | | Concrete slab (MADE GROUND) | | |
| | | | | | 0.30 | | Loose slightly sandy subangular to subrounded fine to coarse GRAVEL of mixed lithologies (subbase) (MADE GROUND) | | |
| | | | | | 0.90 | | Firm grey sandy slightly gravelly CLAY. Gravels are subangular to subrounded fine of siltstone and mudstone. (TIDAL FLAT DEPOSITS) | | |
| | | | 0.80 | ES | | | | | |
| | | | 1.00 | ES | | | | | |
| | | | 1.00 | PP | 50.0kPa | | | Firm very thinly laminated grey mottled brown sandy CLAY with rare rootlets. (TIDAL FLAT DEPOSITS) | 1 |
| | | | 1.50 | B | | | | | |
| | | | 2.00 | PP | 60.0kPa | | | | 2 |
| | | 2.20 | | | 2.20 | | Soft brown sandy CLAY. (TIDAL FLAT DEPOSITS) | | |
| | | 2.30 | B | | 2.40 | | | | |
| | | 2.50 | B | | 2.50 | | Loose grey sandy subangular to subrounded fine to coarse GRAVEL of mudstone and siltstone (TIDAL FLAT DEPOSITS) | | |
| | | | | | | | End of Trial Pit at 2.500m | | |
| | | | | | | | | 3 | |
| | | | | | | | | 4 | |
| | | | | | | | | 5 | |

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| Dimensions | | Trench Support and Comment | | | Pumping Data | | |
|------------|-----------|----------------------------|--------------|---------|--------------|------|---------|
| Pit Length | Pit Width | Pit Stability | Shoring Used | Remarks | Date | Rate | Remarks |
| 1.20 | 0.45 | Stable | | | | | |

Remarks
Water ingress at 2.40m. Pit becomes unstable, unstable to progress.

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|--|---------------------|-------------------------|-----------------|--------------------------------|-----------------------------|
| Project Name: Ty Hapus, Llandudno | | Client: Datrys | | Date: 17/12/2024 | |
| Location: Ffordd Penrhyn, Llandudno LL30 1HB | | Contractor: GroundSolve | | Co-ords: E278506.80 N381651.92 | |
| Project No. : 3222 | | Crew Name: | | Equipment: ECR580 | |
| Location Number TP103 | Location Type TP | Level | Logged By AR | Scale 1:25 | Page Number Sheet 1 of 1 |

| Backfill/Instal'n | Water Strikes | Sample and In Situ Testing | | | Depth (m) | Level (m) | Legend | Stratum Description | |
|-------------------|---------------|----------------------------|------|----------|-----------|-----------|--|---------------------|--|
| | | Depth (m) | Type | Results | | | | | |
| | | 0.20 | B | | | | Grass over loose brown slightly clayey slightly gravelly fine to coarse SAND with rootlets. Gravels are subangular fine to coarse of siltstone and mudstone | | |
| | | 0.30 | ES | | 0.30 | | (TOPSOIL) | | |
| | | 0.50 | B | | 0.45 | | Loose reddish brown sandy subangular to rounded fine to coarse GRAVEL of siltstone, slate, granite, schist and sandstone with many cobbles. Cobbles are subangular of mudstone, granite and siltstone. | | |
| | | 0.50 | ES | | | | (MADE GROUND) | | |
| | | 1.00 | B | | 1.00 | | Firm very thinly laminated grey mottled brown sandy slightly gravelly CLAY. Gravels are subangular to subrounded fine of siltstone and mudstone. | 1 | |
| | | 1.00 | ES | | | | (TIDAL FLAT DEPOSITS) | | |
| | | 1.00 | PP | 175.0kPa | | | Stiff very thinly laminated grey mottled brown sandy slightly gravelly CLAY. Gravels are subangular to subrounded fine of siltstone and mudstone. | | |
| | | | | | | | (TIDAL FLAT DEPOSITS) | | |
| | | 1.80 | D | | 2.00 | | | 2 | |
| | | 2.20 | D | | 2.35 | | Soft brown sandy CLAY. | | |
| | | | | | | | (TIDAL FLAT DEPOSITS) | | |
| | | 2.40 | B | | 2.60 | | Loose grey sandy subangular to subrounded fine to coarse GRAVEL of mudstone and siltstone | | |
| | | | | | | | (TIDAL FLAT DEPOSITS) | | |
| | | | | | | | End of Trial Pit at 2.600m | 3 | |
| | | | | | | | | 4 | |
| | | | | | | | | 5 | |

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| Dimensions | | Trench Support and Comment | | Pumping Data | | | |
|------------|-----------|----------------------------|--------------|--------------|------|------|---------|
| Pit Length | Pit Width | Pit Stability | Shoring Used | Remarks | Date | Rate | Remarks |
| 1.20 | 0.45 | Stable | | | | | |

Remarks
 Water ingress at 2.40m. Pit becomes unstable, unstable to progress.

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|--|------------------|------------------------------|-----------------|---|-----------------------------|
| Project Name: Ty Hapus,Llandudno | | Client: Datrys | | Date: 18/12/2024 | |
| Location: Ffordd Penrhyn, Llandudno LL30 1HB | | Contractor: GroundSolve | | Co-ords: E278456.67 N381643.11 | |
| Project No. : 3222 | | Crew Name: Regional Drilling | | Drilling Equipment: Premier Compact 110 | |
| Borehole Number WS101 | Hole Type WLS | Level | Logged By AR | Scale 1:25 | Page Number Sheet 1 of 2 |

| Well | Water Strikes | Sample and In Situ Testing | | | Depth (m) | Level (m) | Legend | Stratum Description | |
|------|---------------|----------------------------|-------------------|-----------------------|-----------|-----------|---|---------------------|--|
| | | Depth (m) | Type | Results | | | | | |
| | | | | | 0.05 | | Concrete slab (MADE GROUND) | | |
| | | 0.20 | ES | | 0.35 | | Loose slightly sandy subangular to subrounded fine to coarse GRAVEL of mixed lithologies (sub base) (MADE GROUND) | | |
| | | 0.50 | ES | | | | Soft grey sandy slightly gravelly CLAY. Gravels are subangular to subrounded fine of siltstone and mudstone. (TIDAL FLAT DEPOSITS) | | |
| | | 1.00 | B | | | | | | |
| | | 1.00 | ES | | | | | | |
| | | 1.20 | SPT | N=4 (1,1/1,1,1,1) | | | | | |
| | | 1.50 - 2.00 | B | | 1.30 | | Soft very thinly laminated grey mottled brown sandy slightly gravelly CLAY. Gravels are subangular to subrounded fine of siltstone and mudstone. (TIDAL FLAT DEPOSITS) | 1 | |
| | | 2.00 | SPT | 3 (1 for 225mm/1,1,1) | 2.00 | | Very soft very thinly laminated grey mottled brown sandy slightly gravelly CLAY. Gravels are subangular to subrounded fine of siltstone and mudstone. (TIDAL FLAT DEPOSITS) | 2 | |
| | | 2.40 | | | | | Loose grey slightly gravelly fine to coarse SAND. Gravels are subangular to rounded fine to medium quartz, siltstone and psammite. (TIDAL FLAT DEPOSITS) | | |
| | | 3.00 - 4.50 | B | | | | | | |
| | 3.00 | SPT | N=4 (1,1/1,1,1,1) | | | | | | |
| | 4.00 | SPT | N=4 (1,1/1,1,1,1) | | | | | | |
| | 5.00 | SPT | N=4 (1,1/1,1,1,1) | | | | | | |

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| Hole Diameter | | Casing Diameter | | Chiselling | | | | Inclination and Orientation | | | |
|---------------|----------|-----------------|----------|------------|------------|----------|------|-----------------------------|------------|-------------|-------------|
| Depth Base | Diameter | Depth Base | Diameter | Depth Top | Depth Base | Duration | Tool | Depth Top | Depth Base | Inclination | Orientation |
| 1.20 | 350 | | | | | | | | | | |
| 2.00 | 101 | | | | | | | | | | |
| 3.00 | 92 | | | | | | | | | | |
| 4.00 | 72 | | | | | | | | | | |
| 5.00 | 62 | | | | | | | | | | |

Remarks

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Unit 1 Well House Barns
Chester Road
Bretton
CH4 0DH

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|--|------------------|------------------------------|-----------------|---|-----------------------------|
| Project Name: Ty Hapus, Llandudno | | Client: Datrys | | Date: 18/12/2024 | |
| Location: Ffordd Penrhyn, Llandudno LL30 1HB | | Contractor: GroundSolve | | Co-ords: E278456.67 N381643.11 | |
| Project No. : 3222 | | Crew Name: Regional Drilling | | Drilling Equipment: Premier Compact 110 | |
| Borehole Number WS101 | Hole Type WLS | Level | Logged By AR | Scale 1:25 | Page Number Sheet 2 of 2 |

| Well | Water Strikes | Sample and In Situ Testing | | | Depth (m) | Level (m) | Legend | Stratum Description |
|------|---------------|----------------------------|------|---------|-----------|-----------|--|---------------------|
| | | Depth (m) | Type | Results | | | | |
| | | | | | 5.45 | | Loose grey slightly gravelly fine to coarse SAND. Gravels are subangular to rounded fine to medium quartz, siltstone and psammite. (TIDAL FLAT DEPOSITS) | |
| | | | | | | | End of Borehole at 5.450m | |

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| Hole Diameter | | Casing Diameter | | Chiselling | | | | Inclination and Orientation | | | |
|---------------|----------|-----------------|----------|------------|------------|----------|------|-----------------------------|------------|-------------|-------------|
| Depth Base | Diameter | Depth Base | Diameter | Depth Top | Depth Base | Duration | Tool | Depth Top | Depth Base | Inclination | Orientation |
| 1.20 | 350 | | | | | | | | | | |
| 2.00 | 101 | | | | | | | | | | |
| 3.00 | 92 | | | | | | | | | | |
| 4.00 | 72 | | | | | | | | | | |
| 5.00 | 62 | | | | | | | | | | |

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| Remarks | GroundSolve Ltd Unit 1 Well House Barns Chester Road Bretton CH4 0DH |
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|--|------------------|------------------------------|-----------------|---|-----------------------------|
| Project Name: Ty Hapus,Llandudno | | Client: Datrys | | Date: 18/12/2024 | |
| Location: Ffordd Penrhyn, Llandudno LL30 1HB | | Contractor: GroundSolve | | Co-ords: E278491.62 N381602.81 | |
| Project No. : 3222 | | Crew Name: Regional Drilling | | Drilling Equipment: Premier Compact 110 | |
| Borehole Number WS102 | Hole Type WLS | Level | Logged By AR | Scale 1:25 | Page Number Sheet 1 of 2 |

| Well | Water Strikes | Sample and In Situ Testing | | | Depth (m) | Level (m) | Legend | Stratum Description | |
|------|---------------|----------------------------|-------------------|--------------------|-----------|-----------|---|---------------------|--|
| | | Depth (m) | Type | Results | | | | | |
| Well | | | | | 0.05 | | Concrete slab (MADE GROUND) | | |
| | | 0.40 | ES | | 0.30 | | Loose slightly sandy subangular to subrounded fine to coarse GRAVEL of mixed lithologies (sub base) (MADE GROUND) | | |
| | | 0.50 - 1.20 | B | | | | Soft dark grey sandy slightly gravelly CLAY. Gravels are subangular to subrounded fine to coarse of siltstone and mudstone. (TIDAL FLAT DEPOSITS) | 1 | |
| | | 1.00 | ES | | | | | | |
| | | 1.20 | SPT | N=4 (1,1/1,1,1,1) | 1.30 | | Soft very thinly laminated grey mottled brown sandy slightly gravelly CLAY. Gravels are subangular to subrounded fine of siltstone and mudstone. (TIDAL FLAT DEPOSITS) | | |
| | | 2.00 | D | | | | <i>Between 1.90m and 2.00m occasional rootlets.</i> | 2 | |
| | | 2.00 | SPT | N=4 (1,1/1,1,1,1) | 2.40 | | | | |
| | | 2.60 - 5.00 | B | | | | Loose grey slightly gravelly fine to coarse SAND. Gravels are subangular to rounded fine to medium quartz, siltstone and psammite. (TIDAL FLAT DEPOSITS) | | |
| | | 3.00 | SPT | N=15 (1,1/3,4,4,4) | 3.00 | | Loose grey slightly gravelly fine to coarse SAND. Gravels are subangular to rounded fine to medium quartz, siltstone and psammite. (TIDAL FLAT DEPOSITS) | 3 | |
| | | 4.00 | SPT | N=16 (5,5/5,5,4,2) | | | | 4 | |
| | 5.00 | SPT | N=5 (1,1/1,1,1,2) | 5.00 | | | 5 | | |

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| Hole Diameter | | Casing Diameter | | Chiselling | | | | Inclination and Orientation | | | |
|---------------|----------|-----------------|----------|------------|------------|----------|------|-----------------------------|------------|-------------|-------------|
| Depth Base | Diameter | Depth Base | Diameter | Depth Top | Depth Base | Duration | Tool | Depth Top | Depth Base | Inclination | Orientation |
| 1.20 | 300 | | | | | | | | | | |
| 2.00 | 101 | | | | | | | | | | |
| 3.00 | 92 | | | | | | | | | | |
| 4.00 | 78 | | | | | | | | | | |
| 5.00 | 72 | | | | | | | | | | |

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|---------|--|--|--|--|--|--|--|--|--|--|--|
| Remarks | | | | | | | | | | GroundSolve Ltd Unit 1 Well House Barns Chester Road Bretton CH4 0DH | |
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|--|------------------|------------------------------|-----------------|---|-----------------------------|
| Project Name: Ty Hapus, Llandudno | | Client: Datrys | | Date: 18/12/2024 | |
| Location: Ffordd Penrhyn, Llandudno LL30 1HB | | Contractor: GroundSolve | | Co-ords: E278491.62 N381602.81 | |
| Project No. : 3222 | | Crew Name: Regional Drilling | | Drilling Equipment: Premier Compact 110 | |
| Borehole Number WS102 | Hole Type WLS | Level | Logged By AR | Scale 1:25 | Page Number Sheet 2 of 2 |

| Well | Water Strikes | Sample and In Situ Testing | | | Depth (m) | Level (m) | Legend | Stratum Description |
|------|---------------|----------------------------|------|---------|-----------|-----------|--|---------------------|
| | | Depth (m) | Type | Results | | | | |
| | | | | | 5.45 | | Loose grey slightly gravelly fine to coarse SAND. Gravels are subangular to rounded fine to medium quartz, siltstone and psammite. (TIDAL FLAT DEPOSITS) | |
| | | | | | | | End of Borehole at 5.450m | |

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| Hole Diameter | | Casing Diameter | | Chiselling | | | | Inclination and Orientation | | | |
|---------------|----------|-----------------|----------|------------|------------|----------|------|-----------------------------|------------|-------------|-------------|
| Depth Base | Diameter | Depth Base | Diameter | Depth Top | Depth Base | Duration | Tool | Depth Top | Depth Base | Inclination | Orientation |
| 1.20 | 300 | | | | | | | | | | |
| 2.00 | 101 | | | | | | | | | | |
| 3.00 | 92 | | | | | | | | | | |
| 4.00 | 78 | | | | | | | | | | |
| 5.00 | 72 | | | | | | | | | | |

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|---------|--|
| Remarks | GroundSolve Ltd Unit 1 Well House Barns Chester Road Bretton CH4 0DH |
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|--|------------------|------------------------------|-----------------|---|-----------------------------|
| Project Name: Ty Hapus, Llandudno | | Client: Datrys | | Date: 18/12/2024 | |
| Location: Ffordd Penrhyn, Llandudno LL30 1HB | | Contractor: GroundSolve | | Co-ords: E278494.02 N381588.93 | |
| Project No. : 3222 | | Crew Name: Regional Drilling | | Drilling Equipment: Premier Compact 110 | |
| Borehole Number WS103 | Hole Type WLS | Level | Logged By AR | Scale 1:25 | Page Number Sheet 1 of 2 |

| Well | Water Strikes | Sample and In Situ Testing | | | Depth (m) | Level (m) | Legend | Stratum Description | |
|------|---------------|----------------------------|-------------|--------------------|--------------------|-----------|--|---------------------|--|
| | | Depth (m) | Type | Results | | | | | |
| | | | | | 0.05 | | Concrete slab (MADE GROUND) | | |
| | | | | | 0.35 | | Loose slightly sandy subangular to subrounded fine to coarse GRAVEL of mixed lithologies (sub base) (MADE GROUND) | | |
| | | | 0.75 | ES | | | Soft dark grey sandy slightly gravelly CLAY. Gravels are subangular to subrounded fine to coarse of siltstone and mudstone. (TIDAL FLAT DEPOSITS) | 1 | |
| | | | 1.00 | D | | | | | |
| | | | 1.00 | ES | | | | | |
| | | | 1.20 | SPT | N=4 (1,1/1,1,1,1) | | | | |
| | | | 2.00 | ES | | 2.00 | | | |
| | | | 2.00 | SPT | N=12 (1,1/3,3,3,3) | | Firm dark grey sandy slightly gravelly CLAY. Gravels are subangular to subrounded fine to coarse of siltstone and mudstone. (TIDAL FLAT DEPOSITS) | 2 | |
| | | | 3.00 - 5.00 | B | | 2.60 | | | |
| | | | 3.00 | SPT | N=8 (1,1/2,2,2,2) | | Medium dense grey slightly gravelly fine to coarse SAND with calcitic bivalve shells . Gravels are subangular to rounded fine to coarse quartz, siltstone and psammite. (TIDAL FLAT DEPOSITS) | 3 | |
| | | 4.00 | SPT | N=12 (5,5/5,3,2,2) | | | 4 | | |
| | | 5.00 | SPT | N=3 (1,0/1,0,1,1) | 5.00 | | 5 | | |

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| Hole Diameter | | Casing Diameter | | Chiselling | | | | Inclination and Orientation | | | |
|---------------|----------|-----------------|----------|------------|------------|----------|------|-----------------------------|------------|-------------|-------------|
| Depth Base | Diameter | Depth Base | Diameter | Depth Top | Depth Base | Duration | Tool | Depth Top | Depth Base | Inclination | Orientation |
| 1.20 | 350 | | | | | | | | | | |
| 2.00 | 101 | | | | | | | | | | |
| 3.00 | 92 | | | | | | | | | | |
| 4.00 | 78 | | | | | | | | | | |
| 5.00 | 72 | | | | | | | | | | |

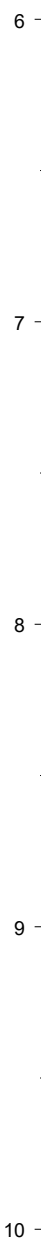
Remarks
 Unable to install monitoring well deeper due to collapse of material.

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|--|------------------|------------------------------|-----------------|---|-----------------------------|
| Project Name: Ty Hapus, Llandudno | | Client: Datrys | | Date: 18/12/2024 | |
| Location: Ffordd Penrhyn, Llandudno LL30 1HB | | Contractor: GroundSolve | | Co-ords: E278494.02 N381588.93 | |
| Project No. : 3222 | | Crew Name: Regional Drilling | | Drilling Equipment: Premier Compact 110 | |
| Borehole Number WS103 | Hole Type WLS | Level | Logged By AR | Scale 1:25 | Page Number Sheet 2 of 2 |

| Well | Water Strikes | Sample and In Situ Testing | | | Depth (m) | Level (m) | Legend | Stratum Description |
|------|---------------|----------------------------|------|---------|-----------|-----------|--|---------------------|
| | | Depth (m) | Type | Results | | | | |
| | | | | | 5.45 | | Loose grey slightly gravelly fine to coarse SAND. Gravels are subangular to rounded fine to medium quartz, siltstone and psammite. (TIDAL FLAT DEPOSITS) | |
| | | | | | | | End of Borehole at 5.450m | |

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| Hole Diameter | | Casing Diameter | | Chiselling | | | | Inclination and Orientation | | | |
|---------------|----------|-----------------|----------|------------|------------|----------|------|-----------------------------|------------|-------------|-------------|
| Depth Base | Diameter | Depth Base | Diameter | Depth Top | Depth Base | Duration | Tool | Depth Top | Depth Base | Inclination | Orientation |
| 1.20 | 350 | | | | | | | | | | |
| 2.00 | 101 | | | | | | | | | | |
| 3.00 | 92 | | | | | | | | | | |
| 4.00 | 78 | | | | | | | | | | |
| 5.00 | 72 | | | | | | | | | | |

Remarks
 Unable to install monitoring well deeper due to collapse of material.

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 CH4 0DH

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|--|------------------|------------------------------|-----------------|---|-----------------------------|
| Project Name: Ty Hapus,Llandudno | | Client: Datrys | | Date: 18/12/2024 | |
| Location: Ffordd Penrhyn, Llandudno LL30 1HB | | Contractor: GroundSolve | | Co-ords: E278475.26 N381576.62 | |
| Project No. : 3222 | | Crew Name: Regional Drilling | | Drilling Equipment: Premier Compact 110 | |
| Borehole Number WS104 | Hole Type WLS | Level | Logged By AR | Scale 1:25 | Page Number Sheet 1 of 2 |

| Well | Water Strikes | Sample and In Situ Testing | | | Depth (m) | Level (m) | Legend | Stratum Description | |
|-------------|---------------|----------------------------|--------------------|-------------------|-----------|---|--|---------------------|--|
| | | Depth (m) | Type | Results | | | | | |
| Well casing | | | | | 0.05 | | Concrete slab (TIDAL FLAT DEPOSITS) | | |
| | | | | | 0.30 | | Loose slightly sandy subangular to subrounded fine to coarse GRAVEL of mixed lithologies (sub base) (MADE GROUND) | | |
| | | 0.50 - 1.20 | B | | | | Soft grey mottled brown sandy CLAY. (TIDAL FLAT DEPOSITS) | | |
| | | 1.00 | ES | | | | | 1 | |
| | | 1.20 | SPT | N=4 (1,1/1,1,1,1) | | | | | |
| | | 2.00 2.00 | D SPT | N=5 (1,1/2,1,1,1) | | | | 2 | |
| | 3.00 3.00 | B SPT | N=6 (1,1/1,1,2,2) | | 2.70 | Loose grey slightly gravelly fine to coarse SAND with calcitic bivalve shells . Gravels are subangular to rounded fine to coarse quartz, siltstone and psammite. (TIDAL FLAT DEPOSITS) | 3 | | |
| | 4.00 | SPT | N=10 (3,3/4,3,2,1) | | 4.00 | Medium dense grey slightly gravelly fine to coarse SAND. Gravels are subangular to rounded fine to medium quartz, siltstone and psammite. (TIDAL FLAT DEPOSITS) | 4 | | |
| | 5.00 | SPT | N=4 (1,1/1,1,1,1) | | 5.00 | | 5 | | |

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| Hole Diameter | | Casing Diameter | | Chiselling | | | | Inclination and Orientation | | | |
|---------------|----------|-----------------|----------|------------|------------|----------|------|-----------------------------|------------|-------------|-------------|
| Depth Base | Diameter | Depth Base | Diameter | Depth Top | Depth Base | Duration | Tool | Depth Top | Depth Base | Inclination | Orientation |
| 1.20 | 350 | | | | | | | | | | |
| 2.00 | 101 | | | | | | | | | | |
| 3.00 | 92 | | | | | | | | | | |
| 4.00 | 78 | | | | | | | | | | |
| 5.00 | 72 | | | | | | | | | | |

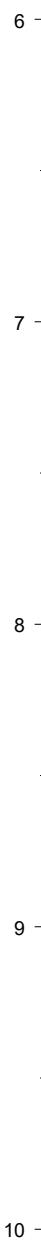
Remarks
No recovery between 1.20m and 2.00m.

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Unit 1 Well House Barns
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CH4 0DH

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|--|------------------|------------------------------|-----------------|---|-----------------------------|
| Project Name: Ty Hapus, Llandudno | | Client: Datrys | | Date: 18/12/2024 | |
| Location: Ffordd Penrhyn, Llandudno LL30 1HB | | Contractor: GroundSolve | | Co-ords: E278475.26 N381576.62 | |
| Project No. : 3222 | | Crew Name: Regional Drilling | | Drilling Equipment: Premier Compact 110 | |
| Borehole Number WS104 | Hole Type WLS | Level | Logged By AR | Scale 1:25 | Page Number Sheet 2 of 2 |

| Well | Water Strikes | Sample and In Situ Testing | | | Depth (m) | Level (m) | Legend | Stratum Description |
|------|---------------|----------------------------|------|---------|-----------|-----------|--|---------------------|
| | | Depth (m) | Type | Results | | | | |
| | | | | | 5.45 | | Loose grey slightly gravelly fine to coarse SAND. Gravels are subangular to rounded fine to medium quartz, siltstone and psammite. (TIDAL FLAT DEPOSITS) | |
| | | | | | | | End of Borehole at 5.450m | |

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| Hole Diameter | | Casing Diameter | | Chiselling | | | | Inclination and Orientation | | | |
|---------------|----------|-----------------|----------|------------|------------|----------|------|-----------------------------|------------|-------------|-------------|
| Depth Base | Diameter | Depth Base | Diameter | Depth Top | Depth Base | Duration | Tool | Depth Top | Depth Base | Inclination | Orientation |
| 1.20 | 350 | | | | | | | | | | |
| 2.00 | 101 | | | | | | | | | | |
| 3.00 | 92 | | | | | | | | | | |
| 4.00 | 78 | | | | | | | | | | |
| 5.00 | 72 | | | | | | | | | | |

Remarks
No recovery between 1.20m and 2.00m.

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|--|------------------|------------------------------|-----------------|---|-----------------------------|
| Project Name: Ty Hapus,Llandudno | | Client: Datrys | | Date: 18/12/2024 | |
| Location: Ffordd Penrhyn, Llandudno LL30 1HB | | Contractor: GroundSolve | | Co-ords: E278422.94 N381608.02 | |
| Project No. : 3222 | | Crew Name: Regional Drilling | | Drilling Equipment: Premier Compact 110 | |
| Borehole Number WS105 | Hole Type WLS | Level | Logged By AR | Scale 1:25 | Page Number Sheet 1 of 2 |

| Well | Water Strikes | Sample and In Situ Testing | | | Depth (m) | Level (m) | Legend | Stratum Description | |
|-------------|---------------|----------------------------|--------------------|-------------------|-----------|-----------|--|---------------------|--|
| | | Depth (m) | Type | Results | | | | | |
| Well casing | | | | | 0.10 | | Concrete slab (TIDAL FLAT DEPOSITS) | | |
| | | | | | 0.30 | | Loose slightly sandy subangular to subrounded fine to coarse GRAVEL of mixed lithologies (sub base) (TIDAL FLAT DEPOSITS) | | |
| | | 0.50 | ES | | | | | | |
| | | 0.50 - 1.00 | B | | | | Soft grey mottled brown sandy CLAY. (TIDAL FLAT DEPOSITS) | | |
| | | 1.00 | ES | | | | | 1 | |
| | | 1.20 | SPT | N=4 (1,1/1,1,1,1) | | | | | |
| | | 1.65 | D | | | | | | |
| | | 2.00 - 2.45 | D | | | | | 2 | |
| | | 2.00 | SPT | N=7 (1,1/1,2,2,2) | | | | | |
| | | 2.50 | D | | | | | | |
| | 3.00 - 5.00 | B | | | 2.80 | | Medium dense grey slightly gravelly fine to coarse SAND with calcitic bivalve shells . Gravels are subangular to rounded fine to coarse quartz, siltstone and psammite. (TIDAL FLAT DEPOSITS) | 3 | |
| | 3.00 | SPT | N=11 (1,1/1,3,3,4) | | | | | 4 | |
| | | | | | | | | 5 | |

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| Hole Diameter | | Casing Diameter | | Chiselling | | | | Inclination and Orientation | | | |
|---------------|----------|-----------------|----------|------------|------------|----------|------|-----------------------------|------------|-------------|-------------|
| Depth Base | Diameter | Depth Base | Diameter | Depth Top | Depth Base | Duration | Tool | Depth Top | Depth Base | Inclination | Orientation |
| 1.20 | 350 | | | | | | | | | | |
| 2.00 | 101 | | | | | | | | | | |
| 3.00 | 92 | | | | | | | | | | |
| 4.00 | 78 | | | | | | | | | | |
| 5.00 | 72 | | | | | | | | | | |

Remarks
No recovery between 1.20m and 2.00m.

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| | | | | | |
|--|------------------|------------------------------|-----------------|---|-----------------------------|
| Project Name: Ty Hapus,Llandudno | | Client: Datrys | | Date: 18/12/2024 | |
| Location: Ffordd Penrhyn, Llandudno LL30 1HB | | Contractor: GroundSolve | | Co-ords: E278423.17 N381618.32 | |
| Project No. : 3222 | | Crew Name: Regional Drilling | | Drilling Equipment: Premier Compact 110 | |
| Borehole Number WS106 | Hole Type WLS | Level | Logged By AR | Scale 1:25 | Page Number Sheet 1 of 2 |

| Well | Water Strikes | Sample and In Situ Testing | | | Depth (m) | Level (m) | Legend | Stratum Description | |
|------|---------------|-----------------------------|----------------|--------------------|-----------|-----------|--|---------------------|--|
| | | Depth (m) | Type | Results | | | | | |
| ▼ | | | | | 0.10 | | Concrete slab (TIDAL FLAT DEPOSITS) | | |
| | | 0.50 0.50 - 1.00 | ES B | | 0.35 | | Loose slightly sandy subangular to subrounded fine to coarse GRAVEL of mixed lithologies (sub base) (TIDAL FLAT DEPOSITS) | | |
| | | 1.00 1.20 - 2.00 1.20 | ES B SPT | N=4 (1,1/1,1,1,1) | | | Soft brown mottled grey sandy CLAY with rare rootlets. (TIDAL FLAT DEPOSITS) | 1 | |
| | | 2.00 | SPT | N=3 (0,0/0,1,1,1) | 2.00 | | Very soft brown mottled grey sandy CLAY with rare rootlets. (TIDAL FLAT DEPOSITS) | 2 | |
| | | 2.80 - 5.45 3.00 | B SPT | N=4 (0,0/1,1,1,1) | 2.50 | | Loose grey slightly gravelly fine to coarse SAND with calcitic bivalve shells . Gravels are subangular to rounded fine to coarse quartz, siltstone and psammite. (TIDAL FLAT DEPOSITS) | 3 | |
| | | 4.00 | SPT | N=20 (3,4/4,5,5,6) | 4.00 | | Medium dense grey slightly gravelly fine to coarse SAND with calcitic bivalve shells . Gravels are subangular to rounded fine to coarse quartz, siltstone and psammite. (TIDAL FLAT DEPOSITS) | 4 | |
| | | 5.00 | SPT | N=6 (1,1/1,1,2,2) | 5.00 | | | 5 | |

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| Hole Diameter | | Casing Diameter | | Chiselling | | | Inclination and Orientation | | | | |
|---------------|----------|-----------------|----------|------------|------------|----------|-----------------------------|-----------|------------|-------------|-------------|
| Depth Base | Diameter | Depth Base | Diameter | Depth Top | Depth Base | Duration | Tool | Depth Top | Depth Base | Inclination | Orientation |
| 1.20 | 350 | | | | | | | | | | |
| 2.00 | 101 | | | | | | | | | | |
| 3.00 | 92 | | | | | | | | | | |
| 4.00 | 78 | | | | | | | | | | |
| 5.00 | 72 | | | | | | | | | | |

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| Remarks | GroundSolve Ltd Unit 1 Well House Barns Chester Road Bretton CH4 0DH |
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|--|------------------|------------------------------|-----------------|---|-----------------------------|
| Project Name: Ty Hapus,Llandudno | | Client: Datrys | | Date: 18/12/2024 | |
| Location: Ffordd Penrhyn, Llandudno LL30 1HB | | Contractor: GroundSolve | | Co-ords: E278423.17 N381618.32 | |
| Project No. : 3222 | | Crew Name: Regional Drilling | | Drilling Equipment: Premier Compact 110 | |
| Borehole Number WS106 | Hole Type WLS | Level | Logged By AR | Scale 1:25 | Page Number Sheet 2 of 2 |

| Well | Water Strikes | Sample and In Situ Testing | | | Depth (m) | Level (m) | Legend | Stratum Description |
|------|---------------|----------------------------|------|---------|-----------|-----------|---|---------------------|
| | | Depth (m) | Type | Results | | | | |
| | | | | | 5.45 | | Loose grey slightly gravelly fine to coarse SAND with calcitic bivalve shells . Gravels are subangular to rounded fine to coarse quartz, siltstone and psammite. (TIDAL FLAT DEPOSITS) | |
| | | | | | | | End of Borehole at 5.450m | |

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| Hole Diameter | | Casing Diameter | | Chiselling | | | | Inclination and Orientation | | | |
|---------------|----------|-----------------|----------|------------|------------|----------|------|-----------------------------|------------|-------------|-------------|
| Depth Base | Diameter | Depth Base | Diameter | Depth Top | Depth Base | Duration | Tool | Depth Top | Depth Base | Inclination | Orientation |
| 1.20 | 350 | | | | | | | | | | |
| 2.00 | 101 | | | | | | | | | | |
| 3.00 | 92 | | | | | | | | | | |
| 4.00 | 78 | | | | | | | | | | |
| 5.00 | 72 | | | | | | | | | | |

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|---------|--|
| Remarks | GroundSolve Ltd Unit 1 Well House Barns Chester Road Bretton CH4 0DH |
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|--|------------------|------------------------------|-----------------|---|-----------------------------|
| Project Name: Ty Hapus, Llandudno | | Client: Datrys | | Date: 19/12/2024 | |
| Location: Ffordd Penrhyn, Llandudno LL30 1HB | | Contractor: GroundSolve | | Co-ords: E278491.65 N381632.81 | |
| Project No. : 3222 | | Crew Name: Regional Drilling | | Drilling Equipment: Premier Compact 110 | |
| Borehole Number WS107 | Hole Type WLS | Level | Logged By AR | Scale 1:25 | Page Number Sheet 1 of 2 |

| Well | Water Strikes | Sample and In Situ Testing | | | Depth (m) | Level (m) | Legend | Stratum Description | |
|-------|---------------|----------------------------|-------------------------|-------------------|-----------|-----------|--|---|---|
| | | Depth (m) | Type | Results | | | | | |
| Water | | 0.20 | ES | | 0.30 | AR | | Grass over loose brown slightly clayey slightly gravelly fine to coarse SAND with rootlets. Gravels are subangular fine to coarse of siltstone and mudstone (TIDAL FLAT DEPOSITS) Soft brown mottled grey sandy CLAY with rare rootlets. (TIDAL FLAT DEPOSITS) | 1 |
| | | 0.50 - 1.20 | B | | | | | | |
| | | 0.80 | ES | | | | | | |
| | | 1.20 - 2.00 1.20 | B SPT | N=4 (1,1/1,1,1,1) | | | | | |
| | | 2.00 | SPT | N=7 (1,1/1,2,2,2) | | | | | |
| | 2.50 - 4.00 | B | | 2.30 | | | Loose grey gravelly fine to coarse SAND with calcitic bivalve shells . Gravels are subangular to rounded fine to coarse quartz, siltstone and psammite. (TIDAL FLAT DEPOSITS) | 2 | |
| | 3.00 | SPT | N=6 (1,1/1,1,2,2) | | | | | 3 | |
| | 4.00 | SPT | N=50 (7,8/50 for 290mm) | | | | | 4 | |
| | | | | | | | | 5 | |

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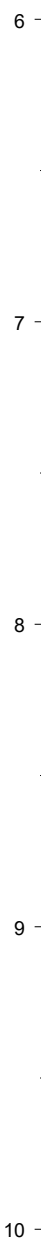
| Hole Diameter | | Casing Diameter | | Chiselling | | | | Inclination and Orientation | | | |
|---------------|----------|-----------------|----------|------------|------------|----------|------|-----------------------------|------------|-------------|-------------|
| Depth Base | Diameter | Depth Base | Diameter | Depth Top | Depth Base | Duration | Tool | Depth Top | Depth Base | Inclination | Orientation |
| 1.20 | 350 | | | | | | | | | | |
| 2.00 | 101 | | | | | | | | | | |
| 3.00 | 92 | | | | | | | | | | |
| 4.00 | 78 | | | | | | | | | | |
| 5.00 | 72 | | | | | | | | | | |

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| Remarks | GroundSolve Ltd Unit 1 Well House Barns Chester Road Bretton CH4 0DH |
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|--|------------------|------------------------------|-----------------|---|-----------------------------|
| Project Name: Ty Hapus,Llandudno | | Client: Datrys | | Date: 19/12/2024 | |
| Location: Ffordd Penrhyn, Llandudno LL30 1HB | | Contractor: GroundSolve | | Co-ords: E278491.65 N381632.81 | |
| Project No. : 3222 | | Crew Name: Regional Drilling | | Drilling Equipment: Premier Compact 110 | |
| Borehole Number WS107 | Hole Type WLS | Level | Logged By AR | Scale 1:25 | Page Number Sheet 2 of 2 |

| Well | Water Strikes | Sample and In Situ Testing | | | Depth (m) | Level (m) | Legend | Stratum Description |
|------|---------------|----------------------------|------|---------|-----------|---|--|---------------------|
| | | Depth (m) | Type | Results | | | | |
| | | | | | 5.45 |  | Loose grey gravelly fine to coarse SAND with calcitic bivalve shells . Gravels are subangular to rounded fine to coarse quartz, siltstone and psammite. (TIDAL FLAT DEPOSITS) | |
| | | | | | | | End of Borehole at 5.450m | |

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| Hole Diameter | | Casing Diameter | | Chiselling | | | | Inclination and Orientation | | | |
|---------------|----------|-----------------|----------|------------|------------|----------|------|-----------------------------|------------|-------------|-------------|
| Depth Base | Diameter | Depth Base | Diameter | Depth Top | Depth Base | Duration | Tool | Depth Top | Depth Base | Inclination | Orientation |
| 1.20 | 350 | | | | | | | | | | |
| 2.00 | 101 | | | | | | | | | | |
| 3.00 | 92 | | | | | | | | | | |
| 4.00 | 78 | | | | | | | | | | |
| 5.00 | 72 | | | | | | | | | | |

Remarks

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 Unit 1 Well House Barns
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 CH4 0DH

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|--|------------------|------------------------------|-----------------|---|-----------------------------|
| Project Name: Ty Hapus, Llandudno | | Client: Datrys | | Date: 19/12/2024 | |
| Location: Ffordd Penrhyn, Llandudno LL30 1HB | | Contractor: GroundSolve | | Co-ords: E278489.09 N381633.79 | |
| Project No. : 3222 | | Crew Name: Regional Drilling | | Drilling Equipment: Premier Compact 110 | |
| Borehole Number WS108 | Hole Type WLS | Level | Logged By AR | Scale 1:25 | Page Number Sheet 1 of 1 |

| Well | Water Strikes | Sample and In Situ Testing | | | Depth (m) | Level (m) | Legend | Stratum Description | |
|-------------------------------|---------------|----------------------------|------|-------------------------|-----------|-----------|---|---------------------|--|
| | | Depth (m) | Type | Results | | | | | |
| Well 1 2 3 4 5 | | 0.20 | ES | | 0.10 | | Concrete flag stone (TIDAL FLAT DEPOSITS) | | |
| | | 0.40 - 0.90 | B | | 0.30 | | Loose reddish brown clayey slightly sandy subangular fine to coarse GRAVEL of sandstone (sub base) (TIDAL FLAT DEPOSITS) | | |
| | | 0.50 | ES | | | | Soft dark grey sandy slightly gravelly CLAY with low cobble content. Gravels are subangular to subrounded fine to coarse sandstone and brick. Cobbles are subangular of siltstone. (TIDAL FLAT DEPOSITS) | | |
| | | 1.00 | ES | | 0.90 | | Firm grey mottled brown sandy CLAY with occasional rootlets. (TIDAL FLAT DEPOSITS) | 1 | |
| | | 1.20 - 2.00 | B | N=8 (1,1/2,2,2,2) | | | | | |
| | | 1.20 | SPT | | | | | | |
| | | 2.00 | SPT | N=2 (0,0/0,0,1,1) | 2.00 | | Very soft grey mottled brown sandy CLAY with occasional rootlets. (TIDAL FLAT DEPOSITS) | 2 | |
| | | 2.50 - 4.00 | B | | 2.30 | | Very loose grey gravelly fine to coarse SAND with calcitic bivalve shells . Gravels are subangular to rounded fine to coarse quartz, siltstone and psammite. (TIDAL FLAT DEPOSITS) | | |
| | | 3.00 | SPT | 1 (0,0/0,0,1) | | | | 3 | |
| | | 4.00 | SPT | N=50 (6,8/50 for 285mm) | 4.00 | | Very loose grey gravelly fine to coarse SAND with calcitic bivalve shells . Gravels are subangular to rounded fine to coarse quartz, siltstone and psammite. (TIDAL FLAT DEPOSITS) | 4 | |
| | | | | 4.35 | | | | 5 | |

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| Hole Diameter | | Casing Diameter | | Chiselling | | | | Inclination and Orientation | | | |
|---------------|----------|-----------------|----------|------------|------------|----------|------|-----------------------------|------------|-------------|-------------|
| Depth Base | Diameter | Depth Base | Diameter | Depth Top | Depth Base | Duration | Tool | Depth Top | Depth Base | Inclination | Orientation |
| 1.20 | 350 | | | | | | | | | | |
| 2.00 | 101 | | | | | | | | | | |
| 3.00 | 92 | | | | | | | | | | |
| 4.00 | 78 | | | | | | | | | | |
| 5.00 | 72 | | | | | | | | | | |

Remarks
 Refused at 4.35m. Dynamic Probe follow on undertaken .

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|--|------------------|------------------------------|-----------------|---|-----------------------------|
| Project Name: Ty Hapus, Llandudno | | Client: Datrys | | Date: 19/12/2024 | |
| Location: Ffordd Penrhyn, Llandudno LL30 1HB | | Contractor: GroundSolve | | Co-ords: E278480.39 N381650.73 | |
| Project No. : 3222 | | Crew Name: Regional Drilling | | Drilling Equipment: Premier Compact 110 | |
| Borehole Number WS109 | Hole Type WLS | Level | Logged By AR | Scale 1:25 | Page Number Sheet 1 of 1 |

| Well | Water Strikes | Sample and In Situ Testing | | | Depth (m) | Level (m) | Legend | Stratum Description | |
|------|---------------|----------------------------|----------|---------------------------|-----------|-----------|---|---------------------|--|
| | | Depth (m) | Type | Results | | | | | |
| Well | | | | | 0.05 | | Concrete slab (TIDAL FLAT DEPOSITS) | | |
| | | | | | 0.30 | | Loose slightly sandy subangular to subrounded fine to coarse GRAVEL of mixed lithologies (sub base) (TIDAL FLAT DEPOSITS) | | |
| | | 0.50 | ES | | | | Soft brown mottled grey sandy CLAY with rare rootlets. (TIDAL FLAT DEPOSITS) | 1 | |
| | | 1.00 1.00 | D D | | | | | | |
| | | 1.20 - 1.65 1.20 | D SPT | N=4 (1,1/1,1,1,1) | | | | | |
| | | 2.00 - 2.45 2.00 | D SPT | N=6 (1,1/1,1,2,2) | | | | 2 | |
| | | 3.00 - 4.00 3.00 | B SPT | 0 (0 for 450mm/0 for 0mm) | 2.90 | | Very loose grey gravelly fine to coarse SAND with calcitic bivalve shells . Gravels are subangular to rounded fine to coarse quartz, siltstone and psammite. (TIDAL FLAT DEPOSITS) | 3 | |
| | | 4.00 | SPT | N=50 (6,9/50 for 280mm) | 4.00 | | Very dense grey gravelly fine to coarse SAND with calcitic bivalve shells . Gravels are subangular to rounded fine to coarse quartz, siltstone and psammite. (TIDAL FLAT DEPOSITS) | 4 | |
| | | | | | 4.43 | | End of Borehole at 4.430m | 5 | |

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| Hole Diameter | | Casing Diameter | | Chiselling | | | | Inclination and Orientation | | | |
|---------------|----------|-----------------|----------|------------|------------|----------|------|-----------------------------|------------|-------------|-------------|
| Depth Base | Diameter | Depth Base | Diameter | Depth Top | Depth Base | Duration | Tool | Depth Top | Depth Base | Inclination | Orientation |
| 1.20 | 350 | | | | | | | | | | |
| 2.00 | 101 | | | | | | | | | | |
| 3.00 | 92 | | | | | | | | | | |
| 4.00 | 78 | | | | | | | | | | |
| 5.00 | 72 | | | | | | | | | | |

Remarks
No recovery between 1.20m and 2.00m.

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|--|------------------|------------------------------|-----------------|---|-----------------------------|
| Project Name: Ty Hapus,Llandudno | | Client: Datrys | | Date: 19/12/2024 | |
| Location: Ffordd Penrhyn, Llandudno LL30 1HB | | Contractor: GroundSolve | | Co-ords: E278500.23 N381653.88 | |
| Project No. : 3222 | | Crew Name: Regional Drilling | | Drilling Equipment: Premier Compact 110 | |
| Borehole Number WS110 | Hole Type WLS | Level | Logged By AR | Scale 1:25 | Page Number Sheet 1 of 1 |

| Well | Water Strikes | Sample and In Situ Testing | | | Depth (m) | Level (m) | Legend | Stratum Description | |
|------|---------------|------------------------------------|---------------|---------------------------|-----------|-----------|---|---------------------|--|
| | | Depth (m) | Type | Results | | | | | |
| | | | | | 0.05 | | Concrete slab (TIDAL FLAT DEPOSITS) | | |
| | | 0.50 0.50 - 1.00 | ES B | | 0.40 | | Loose slightly sandy subangular to subrounded fine to coarse GRAVEL of mixed lithologies (sub base) (TIDAL FLAT DEPOSITS) | | |
| | | 1.00 | ES | | | | Soft brown mottled grey sandy CLAY with rare rootlets. (TIDAL FLAT DEPOSITS) | 1 | |
| | | 1.20 - 1.65 1.20 - 2.00 1.20 | D B SPT | N=6 (1,1/1,1,2,2) | | | | | |
| | | 2.00 | SPT | N=4 (0,0/1,1,1,1) | | | | 2 | |
| | | 2.50 - 4.00 | B | | 2.30 | | Very loose grey gravelly fine to coarse SAND with calcitic bivalve shells . Gravels are subangular to rounded fine to coarse quartz, siltstone and psammite. (TIDAL FLAT DEPOSITS) | | |
| | | 3.00 | SPT | 0 (0 for 450mm/0 for 0mm) | | | | 3 | |
| | | 4.00 | SPT | N=50 (7,9/50 for 275mm) | 4.00 | | Very dense grey gravelly fine to coarse SAND with calcitic bivalve shells . Gravels are subangular to rounded fine to coarse quartz, siltstone and psammite. (TIDAL FLAT DEPOSITS) | 4 | |
| | | | | | 4.43 | | | | |
| | | | | | | | End of Borehole at 4.430m | 5 | |

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| Hole Diameter | | Casing Diameter | | Chiselling | | | | Inclination and Orientation | | | |
|---------------|----------|-----------------|----------|------------|------------|----------|------|-----------------------------|------------|-------------|-------------|
| Depth Base | Diameter | Depth Base | Diameter | Depth Top | Depth Base | Duration | Tool | Depth Top | Depth Base | Inclination | Orientation |
| 1.20 | 350 | | | | | | | | | | |
| 2.00 | 101 | | | | | | | | | | |
| 3.00 | 92 | | | | | | | | | | |
| 4.00 | 78 | | | | | | | | | | |

Remarks
Borehole collapsed from 3.00m to 5.00m.

GroundSolve Ltd
Unit 1 Well House Barns
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