Carmarthenshire LDP –
Revised 2018-2033
Second Revised Deposit
LDP Submission

Land at Maes y Meillion, Llanybri, Carmarthenshire

April 2023

Summary

Proposal
Carmarthenshire Second Revised Deposit LDP Submission

Location
Land at Maes Y Meillion, Llanybri, Carmarthenshire

Date
April 2023

Project Reference
S20.119

Client
Mr David Rhodri Davies

Product of
Asbri Planning Limited

Prepared by
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Approved by
Rob Davies - Associate

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The conclusions resulting from this study and contained in this report are not necessarily indicative of future conditions or operating practices at or adjacent to the Site. Much of the information presented in this report is based on information provided by others. That information has neither been checked nor verified by Asbri Planning Ltd.

Contents

1 Introduction

1.1 This supporting statement document for the Second Deposit Revised Local Development Plan for Carmarthenshire has been prepared in relation to an existing LDP allocation (SC16/h1 land adjacent to Parc Y Delyn) and adjacent candidate site (SR/108/001 land at Maes Y Meillion) in Llanybri, Carmarthenshire (E: 233989, N: 212783). It is submitted on behalf of Mr David Rhodri Davies.

1.2 The existing LDP allocation (SC16/h1) reproduced in Appendix 1 is proposed to be de-allocated. The reason specified in the Site Assessment Table is *"the site has been allocated since the UDP without any indication of delivery"*. It will be shown in this statement that an Outline Planning application for 13 dwellings was registered on the 20th October, 2020 and subsequently approved by the LPA on the 5th August, 2022 under planning reference PL/00629. The applicant has also subsequently submitted a full planning application for the access in order to bring forward such facilitating works and this has been registered by the LPA and pending determination under planning reference PL/05573. The above show a clear intent by the landowner to bring forward this existing housing allocation, and thus it should not be de-allocated.

1.3 The southern part of the site was previously submitted as a candidate site in 2018 in Appendix 2 (Ref: SR/108/001), but this has not been included within the Deposit Plan. The reason specified in the Site Assessment table is *"site access taken through existing housing allocation which is to be taken out. Therefore this is not taken forward"*. The reason is specific to the access aspect through the existing housing allocation, which should be retained as a housing allocation for the reasons mentioned above. The housing layout and access design is such that it facilitates the delivery of candidate site SR/108/001. The candidate site at present contains old agricultural buildings that are now in a state of disrepair.

1.4 In summary, this submission concerns the entire Maes y Meillion site including both the existing LDP allocation (SC16/h1) and adjacent candidate site (SR/108/001), and the applicant wishes for them to be brought within the settlement limits of Llanybri in order to comply with LDP Policy SD1 (Development Limits), along with being included as a housing allocation in order to accord with Policy HOM1 (Housing Allocation).

1.5 The site is situated in the village of Llanybri, lying to the north west of Llansteffan and situated south of Llangynnog. The site lies roughly 8.5 miles away from Carmarthen town centre where there are a host of amenities and services including supermarkets, a university and leisure centre.

1.6 This submission will demonstrate that the overall site in question, both the existing housing allocation (SC16/h1) and candidate site (SR/108/001) ought to be included within the settlement boundary of Llanybri in the Deposit LDP. Efforts have been made to deliver the existing allocation, with this portion of the site having gained outline planning permission for the erection of 13 dwellings and associated infrastructure work (Ref: PL/00629), and a planning application was submitted in March 2023 concerning full planning permission for the construction of an access road in order to serve those dwellings (Ref: PL/05573). This proves that an attempt has been made to deliver the only housing allocation in the current LDP for Llanybri, therefore there is no logical reason for its removal within the deposit plan. It is the applicant's intention to bring the site forward via the submission of reserved matters for the housing itself in the near future. The candidate site SR/108/001 is a logical extension of this existing housing allocation and will be accessed through it. Appendix 3 and 4 provide copies of the outline layout plan

and approval respectively, whilst Appendix 5 and 6 provide copies of the proposed access plan and registration document.

1.7 In terms of the content of the submission Section 2 of this report provides a brief description of the site; Section 3 discusses the overall planning policy context; Section 4 assesses the site in the context of criteria identified in Planning Policy Wales. Section 5 provides a summary and conclusions.

2 Site Description

2.1 This section discusses the site's general location and provides a brief description of the application site and its immediate surroundings.

2.2 Llanybri is categorised as a Tier 3 sustainable village situated in the unitary authority of Carmarthenshire. It is located approximately 8.5 miles to the south west of the county town of Carmarthen and approximately 6.5 miles to the south east of St Clears. The highway that runs to the northwest of the site has a 30mph speed limit on entry to the village.

2.3 The majority of the entire site comprises agricultural grazing land, along with the farm holding of Maes Y Meillion. Access to the farm itself can be gained from the county road to the north via the concreted farm road on the eastern side, leading onto a hard-standing area in the south-eastern corner. There is a small agricultural building, which is now redundant and partially collapsed, in this corner of the field. Agricultural grassland and hedgerow forms the north eastern and north western boundaries. The north east of the site is bound by an access track associated with Maes Y Meillion and to the south east by Maes Y Meillion grounds within the ownership of the applicant. The south western boundary is formed by the curtilage of properties within Parc Y Delyn whereas the north western boundary is formed by the main highway running through Llanybri. Lying to the south of the site is an off-road track and children`s play area.

2.4 The village of Llanybri contains few services and facilities. Those located within the village includes places of worship and a public house. Llansteffan located nearby the site contains a few more facilities including Llansteffan primary school, a convenience shop and amenities associated with the coastal location, place of worship and community hall. The nearest service centre to the site is St. Clears which features a wider range of services and facilities including:

- Surgery;
- Ysgol Griffith Jones (Primary);
- St. Clears Leisure Centre;
- Supermarket;
- Convenience Shops; and
- Takeaways

2.5 The site can be reached via the B4312 from Carmarthen, that passes through Llangain, whereas those travelling from a westerly/northerly direction will cross the busy A40 dual carriageway near Bancyfelin and head along a country lane that leads to the centre of Llanybri. The road situated to the northwest of the site currently has a 30mph speed limit as users enter the village of Llanybri. The nearest national cycle route is route no.4 which is a long distance course between London and Fishguard. The nearest point of access for potential users is by Gul Wales: Littlemoor, approximately three miles from the site. Ger y Marbell bus stop is a short walk from the site and is serviced by the 227 bus. This service commences at Ger y Marbell and terminates at Carmarthen, with 6 services heading in that direction, and another six terminating at Ger y Marbell from Carmarthen on the return journey. In terms of trains, the nearest station is in Carmarthen town centre, nine miles away. The station is situated on the West Wales Line and is predominantly served by Transport for Wales who run services to destinations further west, along with journeys to Swansea, Cardiff Central and Manchester Piccadilly. In addition to this, Great Western Railway operate one service daily to London in both directions, and additional services are provided by the operator on Sundays.

2.6 In terms of ecology, a Preliminary Ecological Appraisal was conducted in July 2020 at the site to accompany outline application PL/00629. As it was conducted over two years ago, an updated appraisal of the site was required to accompany the full application for the access. Consequently, Habitat Matters conducted an Ecological Appraisal of the site during December 2022. The Preliminary Ecological summarised that "*The site conditions remain unchanged from the July 2020 proposal apart from the derelict building which has now lost all sections of the roof. The recommendations for ecological mitigation and enhancement remain as before*". A section of hedge requires removal to facilitate the proposed access and will be translocated as shown in Appendix 7. In terms of ecological enhancements, the report suggests that these will be delivered as part of the wider residential development, comprising of suitable landscape planting and bird/bat boxes.

2.7 Intrado were instructed to produce a drainage strategy for the access proposal that is provided in Appendix 8. The engineering layout highlights how drainage aspects have been incorporated into the construction of the access road. These include:
1. 2.75m minimum width (half of highway) to be constructed from permeable asphalt to be lined with permeable geotextile membrane to facilitate infiltration to groundwater network below;
2. Kerb drainage to be installed at low point in highway to drain surface water runoff to infiltration basin during storm events in excess of 1:100yr to avoid highway flooding; and
3. ACO swale inlet (or similar approved product) to be installed in infiltration basin.
In addition to this, the Kerbing Layout notes that the kerb drainage will be implemented at a low point of the highway in order to convey runoff to bioretention section during an extreme storm occurrence greater than 1:100 years. The access and subsequent housing will be subject of separate SAB approval also.

3 Comments on Planning Policy

3.1 Paragraph 9.3 of the Revised Draft LDP correctly recognises the role that smaller settlements within Carmarthenshire have in delivering local and sustainable growth. This is further expanded upon in Paragraph 9.16 which again correctly recognises that by supporting growth of a proportionate scale in such areas, a positive contribution can be made towards the long term sustainability and cohesiveness of rural communities and the rural economy.

3.2 It is clear that there is a reliance on larger sites within rural areas which can be difficult to deliver. Due to issues around deliverability, this has impacted the resilience of housing land supply, with these larger sites not delivering the dwellings promised. A different approach is warranted in certain areas of Carmarthenshire, with a large proportion of the County being rural in nature. Within Tier 3 settlements (Sustainable Villages), sites that are small in scale but are easily deliverable ought to be favoured as they will be able to meet the housing need in an easy manner whilst not hampering the character of the area.

3.3 The Moving Rural Carmarthenshire Forward Report conducted in 2019 stated that in order to make rural areas attractive for younger people adequate housing needed to be provided to ensure that they could remain within their local communities. The report stated that a shift was required from depending on large housing developments to focusing more on smaller scale residential developments that would address housing requirements in rural settlements. A survey produced during the report revealed only 15% of respondents were happy with the housing provided within their rural area.

3.4 It is imperative that a sustainable and proportionate amount of housing growth is allowed in rural areas of Carmarthenshire during the plan period. The lack of such housing at present has unfortunately resulted in younger individuals departing rural areas, looking for housing and work in urban areas which is having a detrimental impact upon the resilience of rural areas

3.5 In terms of policy within the deposit LDP, the two key policies are SD1 (Development Limits) and HOM1 (Housing Allocations). In terms of Policy SD1, the site discussed in this statement ought to be included within the settlement boundary of Llanybri as it would represent a natural extension of the settlement. There is no logical reason for moving the site outside settlement limits within the deposit plan, as the site currently lies within limits and efforts have been made to develop the site, with two planning applications having recently been submitted, with the outline approved confirming acceptance of housing on the site in principle. The candidate site to the south of the existing housing allocation is a logical extension of this and can be delivered via the facilitating infrastructure being developed for the existing housing allocation. The candidate site element includes old agricultural buildings, many of which are now in a state of disrepair.

3.6 In respect of Policy HOM1, there is proof that the site will be delivered as the site has gained outline planning permission for 13 dwellings and associated works, and a full application has recently been submitted for the access works. Welsh Government advice is to remove sites which have proved to be undeliverable, however this is not the case in respect of this land. The land owner is keen to progress development of the site with the submission of reserved matters for the housing itself in the near future. Furthermore, as a result of pulling the site out as a housing allocation within the deposit plan, Llanybri does not have any sites allocated for residential development. Retaining the existing housing allocation and including the logical extension to it will address this deficiency.

3.7 Having considered the last two paragraphs, there is no logical reason for altering the settlement limit of Llanybri, as this reduces opportunity for residential development and sustainable growth within a sustainable village. Furthermore, there is no reason for it to be removed as a housing allocation as there is intent to develop the site as illustrated by the submission of recent applications. Within the current plan, the site accords with LDP policy, and nothing suggests that the site could not do this when it comes to the deposit plan, were it to lie within settlement limits and be allocated for residential development. The candidate site to the south of the existing housing allocation is a logical extension to it and can be facilitated via the access being proposed.

4 Appraisal

4.1 This section examines the characteristics and features of the site in question.

Availability of Previously Developed Land

4.2 The site is not brownfield land but is well-connected to the current settlement pattern of Llanybri and its development for residential purposes represents a logical area for development and inclusion within the settlement boundary, at this location. Lying west is the Parc Y Delyn residential development which has a similar number of residential dwellings to what has gained outline planning permission at the Maes Y Meillion site, along with a comparable layout. Several services and facilities are available in the nearby towns of St Clears and Carmarthen that are a short drive away from the site.

4.3 In order to achieve a sufficient range and choice of housing land opportunities, there will be a need to consider sites which help achieve resilience in rural settings, with this site capable of being delivered in the short to medium term. The existing housing allocation element of the site can offer up to 13 residential units as illustrated in Appendix 3, whilst a few more can be delivered on the candidate site to the south. This will make a positive contribution to housing land supply,

Accessibility

4.4 Although the land consists of undeveloped agricultural grazing land which does not benefit from formal access, the site can be entered via the wider Maes Y Meillion grounds. The proposed access application submitted in March 2023 to the LPA will lie thirty yards south west of the current access. This development will offer access to a highway that runs centrally to the site with the 13 properties situated on either side as shown in Appendix 5. It will provide access to the parking areas, along with a turning head to enable vehicles to enter and leave the site in a forward gear. A section of hedge requires removal to facilitate the proposed access and will be translocated, whereas ecological enhancements as part of the proposed access will comprise suitable landscape planting and bird/bat boxes.

4.5 In terms of facilities, these are limited to a public house, chapel and playground within Llanybri. A range of services and facilities are provided in nearby Carmarthen, that can be reached via a bus service that calls at the nearby Ger Y Marbell bus stop. In terms of trains, the nearest station lies in Carmarthen, where services run to several destinations across south Wales, along with Manchester Piccadilly and London Paddington. The nearest cycle route is no 4 which is a long-distance route between London and Fishguard running via Reading, Bristol, Swansea, Tenby and St. Davids.

4.6 It is evident that drivers travel along the main road running through the village in a sensible manner as residents have to walk along the side of the road due to no footway being constructed. Such an arrangement is not uncommon in rural settlements of Carmarthenshire and underlines that the development is occurring within a pedestrian safe environment.

Land Ownership

4.7 The land to which this submission refers is within the joint-ownership of the Site Promoter – Mr David Rhodri Davies. The landowner is fully committed to bringing forward the development of the site.

Capacity of Infrastructure

Utilities

4.8 All utilities are readily available within the proximity of the site. In addition, as the detailed design of the proposed development progresses, the provision of electric-charging on a plot-by-plot basis will be considered further.

Drainage

4.9 The site is not affected by a flood risk area (which would prevent vulnerable forms of development such as housing), and it is considered that foul water will connect with the existing mains sewer. Drainage aspects have been clearly incorporated into the proposed access, with further detail provided in Appendix 8.

Access

4.10 Achieving sufficient widths and visibility at the site's proposed access point will be achieved, with some of the hedge at the northern end of the site translocated. The development will provide the necessary pedestrian and cyclist infrastructure within the site to encourage residents to walk and cycle, with 2m wide footways included on both sides of the carriageway, and a potential path may be built in future in order to connect the site with the playground that lies south of the site. A S.106 completed in relation to the outline permission also secured a £25,000 contribution towards improving pedestrian facilities in the village of Llanybri.

Impact on the Community/Welsh Language

4.11 It is not considered that the development of the site for housing will have any significant adverse impact upon the Welsh language or any local communities. The nearest primary school is situated in Llansteffan, which is a Welsh medium school therefore enabling development of the site could increase the number of Welsh speakers in the village. A S.106 was completed in relation to the outline which secured 30% affordable housing and a financial contribution towards local education facilities.

Physical and Environmental Constraints

Ecology

4.12 The Preliminary Ecological Appraisal in Appendix 7 summarised that appropriate ecological enhancements will be provided a part of the access application, and the hedge removed to facilitate the access will be translocated.

Visual Impact

4.13 Overall it is considered that the proposal would not have any significant adverse impact upon the visual amenities of the area. Separation distances, to prevent any adverse or overbearing impacts, between proposed dwellings and existing dwellings can easily be provided.

Coalescence of settlements

4.14 Development on the site would not result in the coalescence of settlements. Development of the site would result in the retention of the existing housing allocation in Llanybri and a marginal extension of Llanybri`s development limits within the deposit plan, which makes sense considering a similar scale residential development lies west of the site. Furthermore, part of the site currently lies within settlement limits, and is allocated for residential development within the adopted plan. It has been proven in this submission that the existing allocation is deliverable with progress already made at significant expense to

the applicant by successfully obtaining outline planning permission and submitting a full application to bring forward access facilitating works.

Flood Risk

4.15 The site is not identified in the TAN 15 Development Advice Maps as being at risk from flooding.

Site Contamination

4.16 In terms of ground conditions there are no known constraints that prevent the development of the site for residential uses.

Compatibility with Neighbouring Uses

4.17 It is anticipated that all of the proposed dwellings would respond well to the established character of the surrounding area. It is anticipated that a range of dwelling types and sizes, including 30% affordable dwellings would be incorporated ranging from 2 beds up to 4 beds which forms the basis for interesting street scenes and helps establish a balanced community. Overall it is considered that the proposal would not have any significant adverse impact upon the residential amenities of existing or future occupiers.

The Potential to reduce carbon emissions through co-location with other uses

4.18 The site is proposed for residential uses. However, increasing Llanybri`s population will allow help sustain local facilities and potentially increase demand for additional services to benefit the village.

Relationship with Historic Environment

4.19 The site is not located within or adjacent to the boundary of a Conservation Area. The closest feature of historic importance is Scheduled Ancient Monument Yr Hen Gapel which sits together with Grade II listed Tower of Yr Hen Gapel. These are situated within the village of Llanybri, roughly 0.4 kilometres to the south west of the development site.

Delivery of Key Placemaking Objectives

4.20 Placemaking is at the heart of both 'Future Wales' and Planning Policy Wales (Edition 11, February 2021). As set out at Section 3 of 'Future Wales': "*Future Wales' Outcomes are overarching ambitions based on the national planning principles and national sustainable placemaking outcomes set out in Planning Policy Wales*". Preliminary investigations have identified that the site can provide homes in the right place and create a sustainable, well-designed, and high-quality housing scheme, where people will want to live, in accordance with national placemaking objectives.

Conclusion

5.1 This site representation is made by Asbri Planning Limited on behalf of Mr David Rhodri Davies. It in respect of the land at Maes Y Meillion, Llanybri which should be reinstated within the development limits of the village, as well as being included as a housing allocation as part of the Carmarthenshire County Council Second Deposit Revised Local Development Plan 2018 - 2033.

5.2 The extension of the settlement limit of Llanybri, and reintroduction of Maes y Meillion as a housing allocation for the Tier 3 settlement can ensure that a proportional amount of housing growth will be delivered across the plan period. Across the plan period it is highly unlikely that any other sites will come forward in the settlement, therefore it is essential that this site is reconsidered as part of the deposit plan, and as previously mentioned, the site is within limits and allocated for residential development in the current plan. The candidate site to the south is a logical extension of the existing housing allocation, with it currently including agricultural structures that are in a dilapidated state.

5.3 Whilst the soundness of the Plan is not challenged objections are made to the following policies within the deposit plan:

a) Object to SD1 (Development Limits) – the site shown in Appendix A ought to be reinstated within the settlement limits of Llanybri. Within the adopted plan, the site is within limits however it has been placed outside limits in the deposit plan. There is no justification for it`s removal, and allowing development at the land in Maes y Meillion enables a natural extension of the settlement. Lying west of the site is the Parc Y Delyn residential development which has a similar amount of residential dwellings to what has gained outline planning permission at the Maes Y Meillion site, along with a similar layout. The previous candidate site shown in Appendix B should also be included within the settlement limit as it is a natural extension of the existing housing allocation and can be facilitated by infrastructure developed as part of the current site that benefits from outline planning permission.

b) Object to HOM1 (Housing Allocation) – the Maes y Meillion housing allocation is not included within the deposit plan, although the site has been allocated for 10 dwellings within the adopted plan. The site layout in Appendix 3 shows 13 dwellings will be delivered in total. There is no reason for removing the site as an allocation, and it has gained outline planning permission for the erection of 13 dwellings and associated infrastructure work (Ref: PL/00629), and a subsequent planning application was submitted in March 2023 concerning full planning permission for the construction of an access road in order to serve those dwellings. The applicant is keen to progress with the reserved matters for the site shortly, therefore this would be considered a deliverable allocation were it to be included in the deposit plan. It is critical that this housing allocation is reinstated into the deposit plan as at present, no housing allocations are proposed for Llanybri, and there are limited opportunities for residential development in other parts of the settlement. The candidate site aspect as shown in Appendix B is a natural extension of this and should also be included.

5.4 Extending the development limit to incorporate this site would promote sustainable growth in a way that takes into consideration the nature of the current settlement. There needs to be an opportunity for some proportional housing growth within this tier 3 settlement that can be facilitated over the plan period until 2033. The site could potentially deliver 13-20 dwellings which would complement the existing form of the

settlement. It will not give rise to any significant adverse impacts upon the character of the area, local amenities, residential amenity and highway safety whilst providing a suitable contribution to the area's housing land supply. In addition to this, it is located in a sustainable area where some amenities can be accessed on foot, and nearby Carmarthen can be accessed via a bus service that runs nearby. It is also considered acceptable in terms of drainage and ecological aspects.

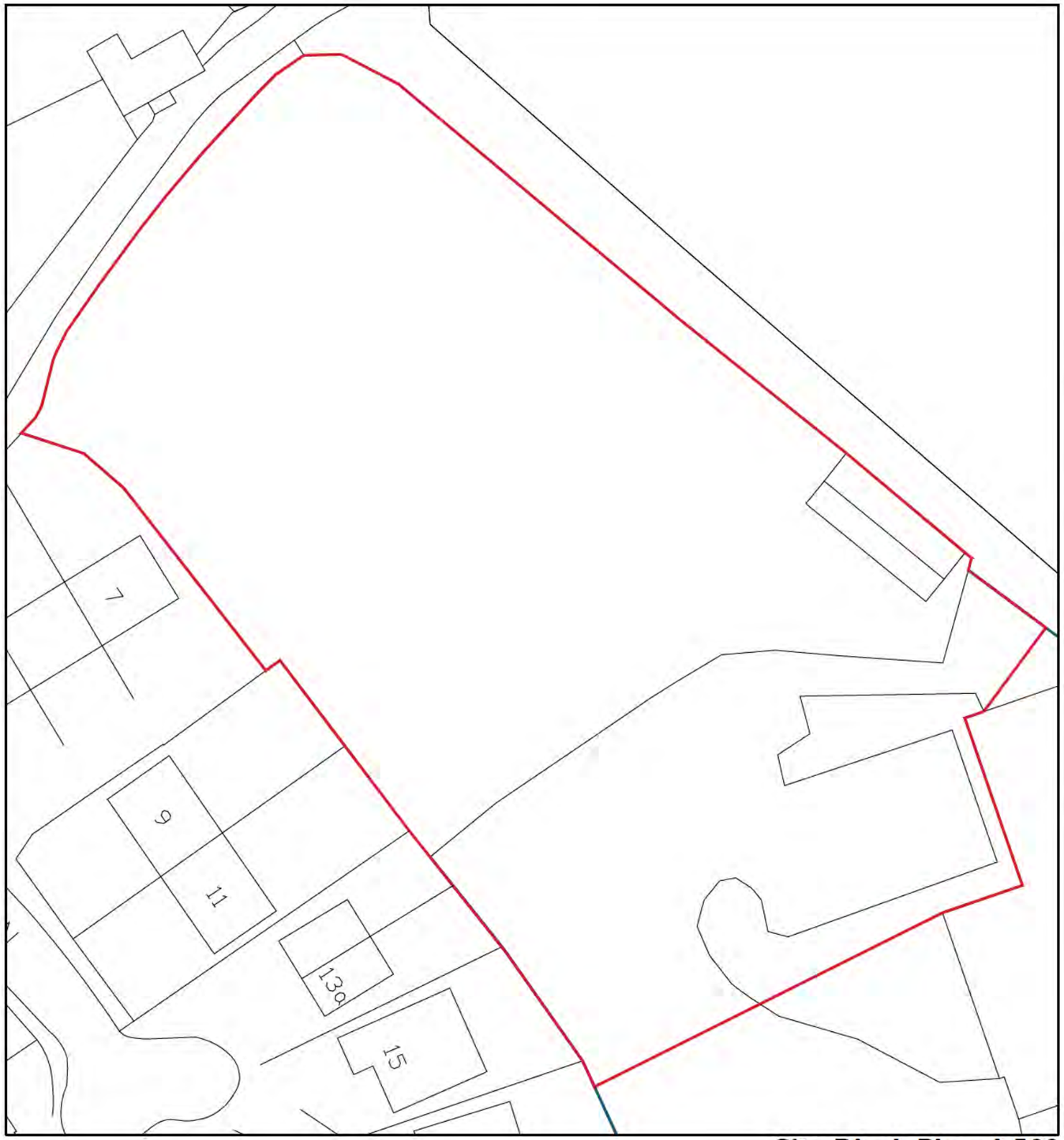
5.5 In summary, it is considered that Carmarthenshire County Council should, in its review of the Local Development Plan, include the site within the settlement boundary of Llanybri, and include the Maes y Meillion site as a housing allocation within the deposit plan.

Appendix 1

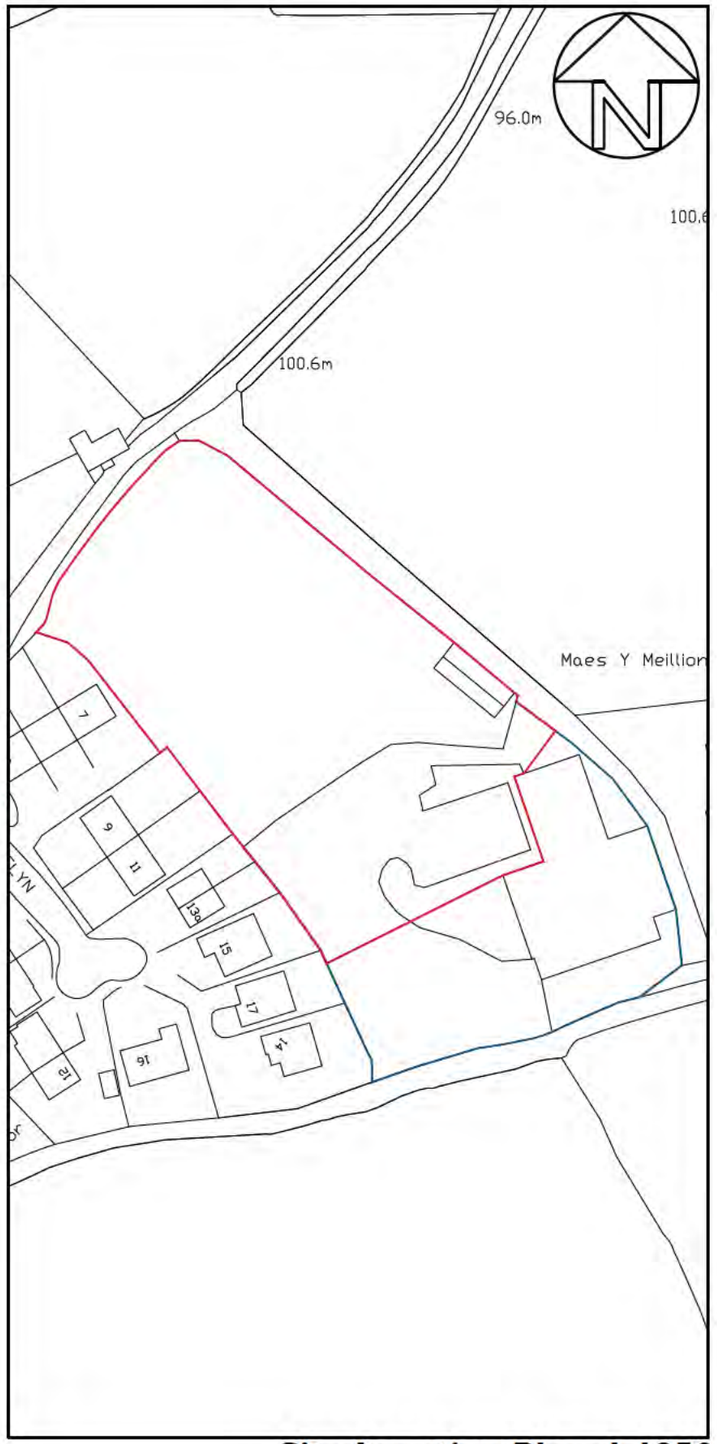
Site Location Plan (Existing LDP Allocation SC16/H1)

SITE BLOCK PLAN & LOCATION PLAN

MAES Y MEILLION, LLANYBRI



Site Block Plan 1:500



Site Location Plan 1:1250

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Revision:	Description:	Date:
A	OS Map updated to include recent development.	14/04/21

Drawing Status:

PLANNING

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CIAT

Client:

Mr. & Mrs. Davies

Project Title:

Outline Planning for 8 Dwellings at Maes Y Meillion, Llanybri

Drawing Title:

Site Block Plan & Location Plan

Scale:	Date:
1:500 & 1:1250 @ A3	July 2020

Job No:	Drawing No:	Rev:
736	02	A

Appendix 2

Candidate Site (SR/108/001)

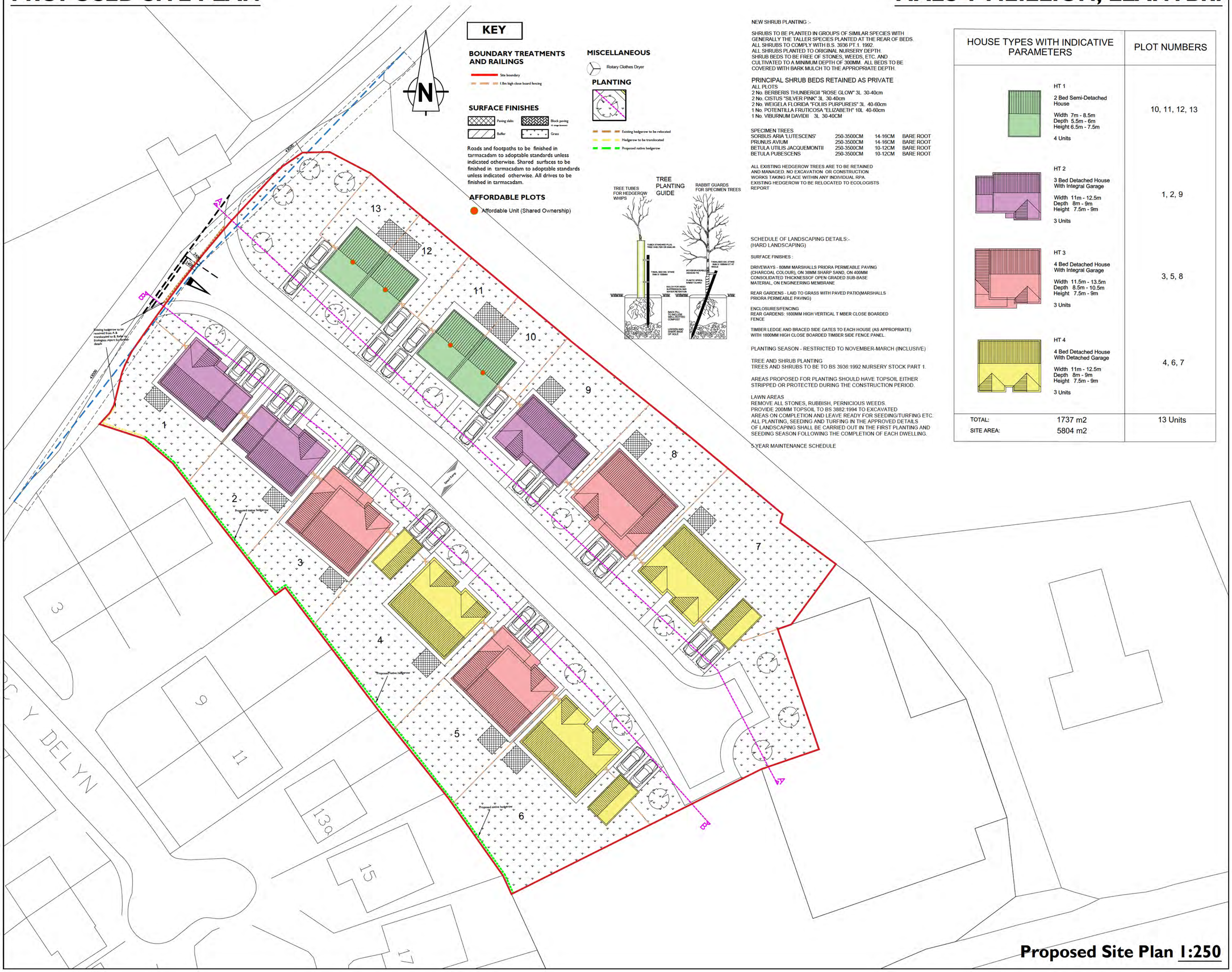

Carmarthenshire. © Crow
Ruin
Maes y Meillion
PARC Y DELYN
SR/108/001

Appendix 3

Proposed Site Layout – Outline Application PL/00629

PROPOSED SITE PLAN

MAES Y MEILLION, LLANYBRI



KEY

BOUNDARY TREATMENTS AND RAILINGS

Site boundary

1.8m high close board fencing

SURFACE FINISHES

Paving slabs

Block paving

Buffer

Grass

Roads and footpaths to be finished in tarmacadam to adoptable standards unless indicated otherwise. Shared surfaces to be finished in tarmacadam to adoptable standards unless indicated otherwise. All drives to be finished in tarmacadam.

AFFORDABLE PLOTS

Affordable Unit (Shared Ownership)

MISCELLANEOUS

Rotary Clothes Dryer

PLANTING

Existing hedgerow to be relocated

Hedgerow to be translocated

Proposed native hedgerow

TREE PLANTING GUIDE

NEW SHRUB PLANTING :-

SHRUBS TO BE PLANTED IN GROUPS OF SIMILAR SPECIES WITH GENERALLY THE TALLER SPECIES PLANTED AT THE REAR OF BEDS.
ALL SHRUBS TO COMPLY WITH B.S. 3936 PT.1. 1992.
ALL SHRUBS PLANTED TO ORIGINAL NURSERY DEPTH.
SHRUB BEDS TO BE FREE OF STONES, WEEDS, ETC. AND CULTIVATED TO A MINIMUM DEPTH OF 300MM. ALL BEDS TO BE COVERED WITH BARK MULCH TO THE APPROPRIATE DEPTH.

PRINCIPAL SHRUB BEDS RETAINED AS PRIVATE
ALL PLOTS
2 No. BERBERIS THUNBERGII "ROSE GLOW" 3L 30-40cm
2 No. CISTUS "SILVER PINK" 3L 30-40cm
2 No. WEIGELA FLORIDA "FOLIIS PURPUREIS" 3L 40-60cm
1 No. POTENTILLA FRUTICOSA "ELIZABETH" 10L 40-60cm
1 No. VIBURNUM DAVIDII 3L 30-40CM

SPECIMEN TREES

SORBUS ARIA 'LUTESCENS'	250-3500CM	14-16CM	BARE ROOT
PRUNUS AVIUM	250-3500CM	14-16CM	BARE ROOT
BETULA UTILIS JACQUEMONTII	250-3500CM	10-12CM	BARE ROOT
BETULA PUBESCENS	250-3500CM	10-12CM	BARE ROOT

ALL EXISTING HEDGEROW TREES ARE TO BE RETAINED AND MANAGED. NO EXCAVATION OR CONSTRUCTION WORKS TAKING PLACE WITHIN ANY INDIVIDUAL RPA EXISTING HEDGEROW TO BE RELOCATED TO ECOLOGISTS REPORT

SCHEDULE OF LANDSCAPING DETAILS:-
(HARD LANDSCAPING)

SURFACE FINISHES :

DRIVEWAYS - 80MM MARSHALLS PRIORA PERMEABLE PAVING (CHARCOAL COLOUR), ON 38MM SHARP SAND, ON 400MM CONSOLIDATED THICKNESSOF OPEN GRADED SUB-BASE MATERIAL, ON ENGINEERING MEMBRANE

REAR GARDENS - LAID TO GRASS WITH PAVED PATIO(MARSHALLS PRIORA PERMEABLE PAVING)

ENCLOSURES/FENCING
REAR GARDENS: 1800MM HIGH VERTICAL T MBER CLOSE BOARDED FENCE

TIMBER LEDGE AND BRACED SIDE GATES TO EACH HOUSE (AS APPROPRIATE) WITH 1800MM HIGH CLOSE BOARDED TIMBER SIDE FENCE PANEL.

PLANTING SEASON - RESTRICTED TO NOVEMBER-MARCH (INCLUSIVE)

TREE AND SHRUB PLANTING
TREES AND SHRUBS TO BE TO BS 3936:1992 NURSERY STOCK PART 1.

AREAS PROPOSED FOR PLANTING SHOULD HAVE TOPSOIL EITHER STRIPPED OR PROTECTED DURING THE CONSTRUCTION PERIOD.

LAWN AREAS
REMOVE ALL STONES, RUBBISH, PERNICIOUS WEEDS.
PROVIDE 200MM TOPSOIL TO BS 3882:1994 TO EXCAVATED AREAS ON COMPLETION AND LEAVE READY FOR SEEDING/TURFING ETC.
ALL PLANTING, SEEDING AND TURFING IN THE APPROVED DETAILS OF LANDSCAPING SHALL BE CARRIED OUT IN THE FIRST PLANTING AND SEEDING SEASON FOLLOWING THE COMPLETION OF EACH DWELLING.

5 YEAR MAINTENANCE SCHEDULE

HOUSE TYPES WITH INDICATIVE PARAMETERS		PLOT NUMBERS
	HT 1 2 Bed Semi-Detached House Width 7m - 8.5m Depth 5.5m - 6m Height 6.5m - 7.5m 4 Units	10, 11, 12, 13
	HT 2 3 Bed Detached House With Integral Garage Width 11m - 12.5m Depth 8m - 9m Height 7.5m - 9m 3 Units	1, 2, 9
	HT 3 4 Bed Detached House With Integral Garage Width 11.5m - 13.5m Depth 8.5m - 10.5m Height 7.5m - 9m 3 Units	3, 5, 8
	HT 4 4 Bed Detached House With Detached Garage Width 11m - 12.5m Depth 8m - 9m Height 7.5m - 9m 3 Units	4, 6, 7
TOTAL: 1737 m2 SITE AREA: 5804 m2		13 Units

Proposed Site Plan 1:250

Notes

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Do not scale from this drawing. Responsibility will not be accepted by Prime Architecture Limited for errors made by others scaling from the drawing. Use written dimensions only. Contractor to verify all dimensions before commencing work on site.

Prime Architecture Limited are to be notified immediately in writing of any discrepancies. All survey information incorporated within the drawings cannot be guaranteed as accurate unless confirmed by a fixed dimension.

All dimensions are in millimeters unless otherwise noted.

This drawing is to be read in conjunction with all relevant project drawings and specification prepared by Prime Architecture Limited and other relevant consultants, specialists, etc.

CDM noted are provided to assist the contractor in managing residual hazards identified during the design stage. Any such notes do not relieve the contractor of their duties and they must provide a safe system of work based on method statements, risk assessments, etc.

Revision:	Description:	Date:
A	OS Map updated to include recent development.	14/04/21

Drawing Status:
PLANNING

PRIME ARCHITECTURE

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www.prime-arch.co.uk

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CIAT Registered Practice

Client:
Mr. & Mrs. Davies

Project Title:
Outline Planning for 13 Dwellings at Maes Y Meillion, Llanybri

Drawing Title:
Proposed Site Plan

Scale:	Date:
1:250 @ A1	July 2020

Job No:	Drawing No:	Rev:
736	01	A

Appendix 4

Outline Approval PL/00629

Cyngor Sir Gâr
Carmarthenshire
County Council

sirgar.llyw.cymru
carmarthenshire.gov.wales

TOWN AND COUNTRY PLANNING ACT 1990

Decision Notice

Outline Planning Permission Granted

Applicant

Mr D Davies

[redacted]

Application No: **PL/00629** registered on 20/10/2020 for:

Proposal:	Proposed outline application for residential development of up to 13 units and associated works with all matters reserved
Location:	Land at Maes Y Meillion, Llanybri, Carmarthen, SA33 5HF
Application Type:	Outline planning consent - all matters reserved

Carmarthenshire County Council HEREBY GRANT OUTLINE PLANNING PERMISSION for the development proposed by you as shown on the application form, plan(s) and supporting document(s) subject to the following condition(s):

Please read the conditions listed below carefully, some conditions may require to be discharged prior to or during development.

Condition 1

Any application for approval of the reserved matters shall be made to the local planning authority not later than three years from the date of this permission.

Reason: Required to be imposed pursuant to Section 91 of the Town and Country Planning Act 1990.

Condition 2

The development shall begin either before the expiration of five years from the date of this permission or before the expiration of two years from the date of approval of the last of the reserved matters to be approved, whichever is the later.

Reason: Required to be imposed pursuant to Section 91 of the Town and Country Planning Act 1990.

Condition 3

Details of the access, appearance, landscaping, layout, and scale, (hereinafter called "the reserved matters") shall be submitted to and approved in writing by the local planning authority before any development begins and the development shall be carried out as approved.

Reason: In the interests of visual amenity.

Condition 4

The permission relates to the land defined in the 1:1250 location plan referenced 02B received on 21 May 2021.

Reason: In the interest of clarity as to the extent of the permission.

Condition 5

No development shall commence until details of a scheme for the disposal of foul and surface water has been submitted to and agreed in writing by the local planning authority. The scheme shall be implemented in accordance with the approved details prior to the occupation of the development and retained in perpetuity.

Reason: To ensure the development is drained in an acceptable manner.

Condition 6

No development, including any site clearance or works of demolition, shall commence until a Construction Environmental Management Plan (CEMP) has been submitted to and approved in writing by the Local Planning Authority. The CEMP shall be implemented as approved during the site preparation and construction phases of the development and should include:

• General Site Management:, construction programme, site clearance requirements, demolition method statement, construction drainage, site set-up plan detailing sensitive receptors and buffers zones, relevant protection measures e.g. fencing.

• Biodiversity Management: tree and hedgerow protection, invasive species management. The CEMP shall reference all biodiversity mitigation and enhancement requirements for the construction phase as referenced in the preliminary ecological assessment.

• Soil management: topsoil strip, storage and amelioration for re-use.

• Control of Nuisances: restrictions on timing/duration/frequency of works, dust control measures, control of light spill and conservation of dark skies.

• Resource Management: fuel and chemical storage, waste management, water consumption, energy consumption.

• Traffic Management: deliveries, plant on site, wheel washing facilities.

• Pollution Prevention: demonstrate compliance with relevant Guidelines for Pollution Prevention, incident response plan, site drainage plan.

• Clerk of works to ensure construction compliance with approved plans and environmental regulations.

• Details of the persons/bodies responsible for particular activities associated with the CEMP and emergency contact details.

Reason: To prevent the pollution of the environment and in the interests of safeguarding residential amenity.

Condition 7

No development shall commence until an Ecological Design Scheme (EDS) has been submitted to and approved in writing by the local planning authority. The EDS shall deliver detailed design proposals which effectively integrate appropriate site specific landscape, ecological and biodiversity objectives and functions. The scheme shall be in compliance with the principles of the landscape and ecological information contained in section 5.0 of the Preliminary Ecological Assessment prepared by Habitat Matters Ltd received on 13 October 2020. The EDS shall be implemented in accordance with the approved details.

Reason: In the interests biodiversity and visual amenity.

Condition 8

No development shall commence until details of existing ground levels and proposed finished ground and floor levels have been submitted to and approved in writing by the local planning authority. The development shall be carried out in accordance with the approved details.

Reason: In the interests if visual amenity and to safeguard the living conditions of adjacent occupiers.

Condition 9

Prior to the commencement of the development a scheme detailing the provision for a footway or footpath (with public utility suitable for adoption) connecting from the development to the U2116 roadway to the south shall be submitted for the written approval of the local planning authority. The scheme shall be implemented in accordance with the approved details before the development is occupied.

Reason: In the interests of highway and pedestrian safety.

Condition 10

Prior to its use by vehicular traffic, the new access road shall be laid out and constructed with 5.0 metre carriageway, 1.8 metre footways, and 6.0 metre kerbed radii at the junction with the U2127 road.

Reason: In the interests of highway safety.

Condition 11

The existing means of vehicular access in the north western corner of the site shall be permanently stopped up, and the public highway reinstated to the written approval of the Local Planning Authority, prior to the new means of vehicular access herein approved, being brought into use.

Reason: In the interests of highway safety.

Condition 12

The gradient of the vehicular access serving the development shall not exceed 1 in 20 for the first 15 metres metres from the edge of the carriageway.

Reason: In the interests of highway safety.

Condition 13

There shall at no time be any growth or obstruction to visibility over 0.9 metres above the adjacent carriageway crown, over the site's whole U2127 Road frontage within 2.4 metres of the near edge of the carriageway.

Reason: In the interests of highway safety.

Condition 14

Prior to any use of the access by vehicular traffic, a visibility splay of 2.4 metres x 43 metres shall be formed and thereafter retained in perpetuity, either side of the centre line of the access in relation to the nearer edge of carriageway. In particular there shall at no time be any obstruction above 0.9 metres within this splay area.

Reason: In the interests of highway safety.

Condition 15

Prior to the commencement of development the written approval of the Local Planning Authority shall be obtained for a scheme of parking and turning facilities within the curtilage of the site, and this shall be dedicated to serve the proposal. The approved scheme is to be fully implemented prior to any part of the development being brought into use, and thereafter shall be retained, unobstructed, in perpetuity. In particular, no part of the parking or turning facilities is to be obstructed by non-motorised vehicles.

Reason: In the interests of highway safety.

Condition 16

Prior to the occupation of any of the dwellings herewith approved, the required access roads and footways from the existing public highway shall be laid out and constructed strictly in accordance with the plans herewith approved, to at least the base course levels, and with the visibility splays provided.

Reason: In the interests of highway safety.

Condition 17

The development hereby permitted shall not be occupied until the speed limit on the U2127 on the site's entire road frontage and along the road to the north east within the vicinity of the site has been reduced to 30mph.

Reason: In the interests of highway safety.

Reasons for Granting Planning Permission

The decision to grant planning permission has been taken in accordance with Section 38 of the Planning and Compulsory Purchase Act 2004, which requires that, in determining a planning application the determination must be in accordance with the Development Plan unless material considerations indicate otherwise.

· The proposed development complies with Policies SP1, SP3 and GP1 of the Carmarthenshire Local Development Plan Adopted 2014 ('the LDP') in that it consists of a sustainable form of development that is compatible with neighbouring land uses, appropriate in terms of scale and design and will not cause unacceptable loss of amenity to neighbouring uses.

- The proposed development complies with Policies H1 and H2 of the Carmarthenshire Local Development Plan Adopted 2014 ('the LDP') in that it is located within the development limits of Llanybri and allocated for residential development purposes.

- The proposed development complies with Policies AH1, GP3 and REC 2 of the Carmarthenshire Local Development Plan Adopted 2014 ('the LDP') in that it will provide a proportion of affordable housing within the development and make a financial contribution towards the improvement of education and pedestrian facilities in the local area.

- The proposed development complies with Policies SP9, GP1 & TR3 of the Carmarthenshire Local Development Plan Adopted 2014 ('the LDP') in that the proposal is located in a sustainable location, will be served by a suitable access and parking provision and will not be detrimental to highway safety.

- The proposed development complies with policies EQ4, EP2 and EP3 of the Carmarthenshire Local Development Plan Adopted 2014 ('the LDP') in that it will not result in any unacceptable ecology, flooding or pollution impacts.

- The proposed development complies with policy GP4 of the Carmarthenshire Local Development Plan Adopted 2014 ('the LDP') in that it will be served by infrastructure that is adequate to meet the needs of the development.

Note 1

Please note that this consent is specific to the plans and particulars approved as part of the application. Any departure from the approved plans will constitute unauthorised development and may be liable to enforcement action. You (or any subsequent developer) should advise the Council of any actual or proposed variations from the approved plans immediately so that you can be advised how to best resolve the matter.

In addition, any Conditions which the Council has imposed on this consent will be listed above and should be read carefully. It is your (or any subsequent developers') responsibility to ensure that the terms of all Conditions are met in full at the appropriate time (as outlined in the specific condition).

The commencement of development without firstly meeting in full the terms of any Conditions which require the submission of details prior to the commencement of development will constitute unauthorised development. This will necessitate the submission of a further application to retain the unauthorised development and may render you liable to formal enforcement action.

Failure on the part of the developer to observe the requirements of any other Conditions could result in the Council pursuing formal enforcement action in the form of a Breach of Condition Notice.

Note 2

Comments and guidance received from consultees relating to this application, including any other permissions or consents required, is available on the Authority's website *(www.carmarthenshire.gov.uk)*.

Note 3

The applicant/developer is advised that this permission is granted subject to the completion of a Section 106 Agreement/Unilateral Undertaking securing a proportion of affordable housing as part of the development and the provision of a commuted payment towards the improvement of education and pedestrian facilities in the local area.

Note 4

This application has been determined within the scope of the delegated authority granted to the Head of Planning by the Meeting of Carmarthenshire County Council on 12 October 2011 (Minute No 7 refers).

DATED: 05/08/2022

[redacted]
Pennaeth Lle a Chynaliadwyedd / Head of Place and Sustainability

PLEASE NOTE: Your attention is drawn to the attached notes which explain, amongst other things, your right of appeal against this decision.

Appendix 5

Access Layout Plan – Full Application PL/05573

NOTES

GENERAL

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. ALL LEVELS ARE IN METRES UNLESS NOTED OTHERWISE.
3. ALL LEVELS RELATE TO ORDNANCE DATUM UNLESS NOTED OTHERWISE.
4. DO NOT SCALE FROM THIS DRAWING. USE FIGURED DIMENSIONS ONLY.
5. ANY DISCREPANCIES TO BE REPORTED IMMEDIATELY TO THE ENGINEER.
6. THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, SUBCONTRACTORS AND SPECIALISTS DRAWINGS AND SPECIFICATIONS.
7. THIS DRAWING IS COPYRIGHT © INTRADO CONSULTING ENGINEERS LTD.
8. ENGINEERING BASED ON SITE LAYOUT BY PRIME ARCHITECTURE DRAWING 736-01 Rev C ISSUED JULY 2020

LEGEND

- EXTERNAL SPOT LEVEL
- SURFACE WATER DRAINAGE (S38 ADOPTABLE)
- PERMEABLE ASPHALT (S38 ADOPTABLE)
- IMPERMEABLE ASPHALT (S38 ADOPTABLE)
- SWALE/ BIORETENTION AREA (S38 ADOPTABLE)
- HIGHWAY CONTOURS (100mm INCREMENTS ILLUSTRATED) (500mm INCREMENTS LABELED)
- SITE BOUNDARY

N

SITE GRID REFERENCE: SN339128 (233971mE, 212801mN)

FOUL WATER DRAINAGE SUBJECT TO S104 & S106 APPROVALS BY DCWW

ADOPTABLE HIGHWAY DESIGN SUBJECT TO CARMARTHENSHIRE COUNCIL S38 & S278 APPROVALS

SURFACE WATER DRAINAGE SUBJECT TO CARMARTHENSHIRE COUNCIL SAB APPROVAL

ANY WORKS CARRIED OUT PRIOR TO THE ISSUE OF RELEVANT APPROVALS ARE ENTIRELY AT THE DEVELOPER'S RISK

REV.	DESCRIPTION	BY	DATE

intrado Consulting Engineers
UNIT G
Upper Boat Business Centre
Pontypridd CF37 5BP
tel: 02920 811097
web: www.intrado.co.uk
e-mail: admin@intrado.co.uk

client: Mr. & Mrs. DAVIES

project: MAES Y MEILLION LANYBRI

drawing title: ENGINEERING LAYOUT

drawn	chkd	scale	date
KMG	CC	1:250 @ A1	JAN 2023

Preliminary	Tender	Construction	Job No.	Drawing No.	Rev.
☒	☐	☐	INT22182	007	0

Appendix 6

Registration Letter – Full Application for Access PL/05573

Archived: 14 April 2023 14:12:07
From: Planning Registrations
Mail received time: Thu, 23 Mar 2023 10:50:57
Sent: Thu, 23 Mar 2023 10:50:50
To: Iwan Rowlands
Subject: PL/05573 ~ Acknowledgement ~ Land at Maes y Meillion, Llanybri, Carmarthen, SA33 5HF
Importance: Normal
Sensitivity: None

PL/05573 - Construction of an access road to serve a residential development that already benefits from outline planning permission (PL/00629) - Land at Maes y Meillion, Llanybri, Carmarthen, SA33 5HF

_____

Hello

Town and Country Planning Act 1990

This is to acknowledge that your planning application / notification (together with the correct fee of £460.00), was registered on 23/03/2023, and given the Application Number: **PL/05573**

The case officer dealing with your application will be: **Charlotte Ford**
~ [redacted]

Please note that the information provided on the application form and in supporting documents may be published on the Authority's website. If you require any further clarification, please contact us.

If, by **17/05/2023** you have not been given a decision in writing and:

• You have not been told that your fee cheque has been dishonoured; or
• You have not agreed in writing to extend the period in which the decision may be given,

Then you can appeal to Planning and Environment Decisions Wales (PEDW) under section 78/section 195 of the Town and Country Planning Act 1990 (unless the application has already been referred by this authority to the Welsh Government).

Appeals must be made on the form which is obtainable from Planning and Environment Decisions Wales, Crown Buildings, Cathays Park, Cardiff, CF10 3NQ or online at: https://gov.wales/planning-appeals

Cofion / Regards

Tîm Cofrestru ~ Registration Team

Lle a Chynaliadwyedd - Cynllunio | Place and Sustainability - Planning

E-bost | Email: [redacted]
Ffôn | Telephone: [redacted]

Croeso i chi gysylltu gyda Cyngor Sir Gâr yn Gymraeg neu'n Saesneg
You're welcome to contact the Council through the medium of Welsh or English

]]>

Checked for spam and viruses
http://www.canit.akauk.net/

Appendix 7

Preliminary Ecological Appraisal

PRELIMINARY ECOLOGICAL ASSESSMENT

for

MAES-Y-MEILLION

LLANYBRI

CARMARTHEN SA33 5HF

CLIENT: Mr D R Davies

Report prepared by:

Fiona Lanc MSc, MCIEEM

Habitat Matters Ltd

[redacted]

[redacted]

[redacted]

[redacted]

(T) [redacted]

Habitat Matters Ltd

CONTENTS

This report was prepared for the specific purpose of carrying out a Preliminary Ecological Appraisal for a proposed development on land at Maes-y-Meillion, Llanybri and no liability will be accepted for use for other purposes or by third parties. Information supplied by the client and third parties has been taken as being correct and no liability can be accepted for errors and omissions. It has been assumed that the client has disclosed all relevant information whether asked for or not.

EXECUTIVE SUMMARY

Habitat Matters Ltd was instructed by Mr D R Davies, to provide an ecological assessment in relation to a proposed residential development at Maes-y-Meillion, Llanybri, Carmarthen.

The site is a field of agricultural grassland on the north-eastern side of Llanybri, lying alongside an earlier residential development.

It is considered that overall there will be no negative impact on the local or regional ecology through the development of the site. A short section of the roadside hedge that will be removed for access to the development is to be translocated to the north-western corner of the same hedge to continue a short distance along a fence boundary with the adjacent property.

There are opportunities to include enhancement measures that will have a positive impact on the biodiversity interest of the site and the local area. These include bird and bat boxes and bee bricks within the new houses and planting of a new native hedgerow along the western boundary of the site.

Due to the time lapse, a site visit was made by Fiona Lanc of Habitat Matters Ltd on 9th December 2022 to review and update the original report. The site conditions remain unchanged from the July 2020 proposal apart from the derelict building which has now lost all sections of the roof. The recommendations for ecological mitigation and enhancement remain as before.

The current application is for the site access only and the main development will be subject to a second planning application. The proposed enhancement measures will be carried out as part of that development.

1.0 INTRODUCTION

Habitat Matters Ltd was instructed by the client, Mr DR Davies, to provide an ecological assessment for an area of land at Maes-y-Meillion, Llanybri. The assessment will inform a planning submission for a new access to the site from off the highway and for a subsequent residential development.

(*The location of the site is shown at Appendix 1).*

1.1 SITE DESCRIPTION & ECOLOGICAL CONTEXT

(*Photos of the site are included at Appendix 3*)

The survey site is part of an agricultural field and an area of concrete hard-standing at Maes-y-Meillion Farm. It is located on the north-eastern edge of Llanybri village at OS Grid Reference SN339127. The land is within the LDP settlement boundary.

The site (and village) is in an exposed and elevated location in the landscape, overlooking the Towy Estuary. The field is agricultural grassland, currently cut for silage. It is a level, free-draining area bordered by a narrow Council road which runs along the northern boundary of the site, the concreted farm road (leading to the farm bungalow) on the eastern side between two mature Leylandii hedges and to the west, an earlier residential development built on Maes-y-Meillion land. A smaller part of the field and a large range of partly redundant agricultural sheds lie to the south of the site; this area is outside the LDP.

Access to the site is currently via the concreted farm road on the eastern side, leading onto a hard-surfaced track in the south-eastern corner, close to the buildings. There is a small agricultural building, now redundant and partly collapsed, in this corner of the field (within the site boundary). The southern edge of the site is continuous with the track and area around the buildings. There are no ditches or other watercourses bordering the site.

2.0 METHODOLOGY

The survey, assessment and reporting was carried out in-line with the Preliminary Ecological Appraisal (2012) guidelines produced by the Chartered Institute of Ecology & Environmental Management (CIEEM), the Phase 1 Habitat Survey methodology (JNCC 2010), the British Standards for Biodiversity: Code of Practice for Planning and Development (BS42020:2013) and other relevant species best practice guidelines.

Following an initial desk study, a walk-over survey of the site was carried out to assess the habitat, the potential value for various species and any potential constraints for the development.

2.1. Desk Study

A desk-study was carried out prior to the field survey. This included reference to:

- OS Maps and Google Earth images in order to identify potential areas of habitat interest that may be impacted by the proposals or may support species that could be affected.
- BS:42020 and best practise guidelines
- Carmarthenshire Biodiversity Action Plan
- Biodiversity data, obtained from WWBIC/ Aderyn
- MAGIC map, Defra
- Relevant legislation

Landscape Context

The site and wider landscape was assessed using Google Earth aerial images and Ordnance Survey maps. This enabled an assessment to be made of off-site features and habitats, and therefore the potential impact of the development on the local biodiversity. The proximity of different habitats and the connectivity of linear features between areas of habitat outside the site boundary and the site itself were included within this assessment.

Llanybri Is situated on an area of high ground almost equidistance from the Towy and Taf Estuaries. Both are major features in the landscape. The development site lies immediately north-east of Llanybri, next to a small residential estate and opposite a chapel and graveyard, bordered by a low stone wall. The landscape surrounding the village is predominantly agricultural, with medium to large fields divided by hedgerows, some with lines of trees; there no trees near the site (the closest being approximately 100m away). There is an extensive area of linear woodland following along a valley, within 1km of the village to the north, and a few smaller areas scattered throughout the landscape but none in the immediate landscape.

2.2 Phase 1 Habitat Survey

A walk-over field survey of the proposed site and the immediate area, where accessible, was carried out by Fiona Lanc MCIEEM, on the 24th July 2020. Conditions were dry & clear during the survey and allowed an assessment to be made of the habitats. The suitability of the recorded habitats for supporting different animal species, including signs and incidental sightings, was also considered during the survey.

The survey provided an assessment of the habitat types and the likelihood of the development having an impact on protected fauna. It included:

- A survey for non-native invasive species, including Japanese Knotweed.
- A search for signs of badger activity on the site
- An assessment of the potential for impact on birds, including suitable nest sites within the area.
- An assessment of the potential impact of the development on bats
- An assessment of the potential impact on reptiles
- An assessment of the potential impact on dormice

3.0 EVALUATION OF ECOLOGICAL FEATURES & IDENTIFICATION OF POTENTIAL IMPACTS

3.1 HABITATS

3.1.1 Protected Sites

The site is approximately 2.5km from the boundary of the Carmarthen Bay & Estuaries Special Area of Conservation (SAC) which includes the Afon Tywi Site of Special Scientific Interest (SSSI) to the east of the site and the Afon Taf SSSI to the west. There is no direct hydraulic connectivity between the site and these protected areas.

3.1.2 Habitat Survey

The survey identified three habitat types on the site, described as follows:

<u>Grassland</u>

The proposed development site is agriculturally-improved grassland. The sward comprises ryegrass (*Lolium*) and clover spp (*Trifolium* spp) and is cut for silage. It had been cut prior to the survey.

The site is classified as Improved Grassland (B4) under the Phase 1 Habitat Classification and considered to be of low ecological interest.

Boundaries

The site boundaries are described as follows:

The **western boundary** is mainly a mixture of fencing (wooden and wire) and a short section of garden hedge. This is of low ecological interest and will be unaffected by the development.

The **eastern boundary** is a tall and dense Leylandii hedge, regularly trimmed and, as typical of this species, bare close to ground level. This will be retained apart from a short section (c 10m) at the south-eastern end. The hedge is of low ecological value but does provide suitable nesting habitat for songbirds and, as such, this short section will be removed outside the bird-nesting season.

The **northern boundary** is a mixed species native hedge, set on a the roadside bank; the top of the hedge is virtually level with the field surface but the bank drops sharply to the road, approximately 2m lower than the field. The access road into Maes-y-Meillion Farm lies at the eastern end of the hedge (and the entrance planted with garden ornamentals including Berberis and Hydrangea) and a gateway at the western end, opposite the chapel, gives access into the field.

The narrow field / hedge margin includes nettle (*Urtica dioica*), broadleaved dock (*Rumex obtusifolius*), hogweed (*Heracleum sphondylium*), cleavers (*Galium aparine*) and field bindweed (*Convolvulus arvensis*), indicating raised nutrient levels. Hedgerow species comprise blackthorn (*Prunus spinosa*), hawthorn (*Crataegus monogyna*), holly (*Ilex aquifolium*), hazel (*Corylus avellana*), elder (*Sambucus nigra*), ash (*Fraxinus excelsior*), ivy (*Hedera helix*), honeysuckle (*Lonicera periclymenum*), dog rose (*Rosa canina*), black bryony (*Tamus communis*) and bramble (*Rubus fruticosus*). Species on the roadside verge, noted during the July survey, include hart's tongue fern (*Asplenium scolopendrium*), red campion (*Silene dioica*), nettle, hogweed, dog's mercury (*Mercurialis perennis*) and Common Polypody fern (*Polypodium vulgare*). The hedge and bank are routinely trimmed.

Although the hedge provides nesting and feeding habitat, the boundary is, overall, considered to be of medium ecological value due to the limited wildlife linkages; it is located at the western end of a long section of closely trimmed roadside hedge and gives way to the village landscape with garden fences and manicured verges. There is a low stone wall on the opposite side of the road and no trees nearby.

Hedgebanks are included within the Farmland Habitats grouping of the Carmarthenshire Local Biodiversity Action Plan due to their importance for biodiversity, landscape and historical aspects. A section of the hedge (c15m) will need to be removed for the site access and visibility splay and mitigation measures will be required to balance this loss; it is proposed to translocate this section to a new location at the western end of the same hedgerow.

The **southern boundary** of the site is open and continuous with the adjacent area of agricultural land.

Buildings

A small, derelict, single-storey building is located in the south-east corner of the site; beyond this there is track leading to a range of agricultural sheds (outside the site area); this is part concrete / gravelled and part earth. A concrete apron next to the sheds, used for temporary storage of machinery and agricultural materials, is included within the development site. These areas are considered to be of low ecological value (see 3.2 Species – Bats / Reptiles)

3.1.3 Invasive Non-Native Species

There was no evidence of invasive species such as Japanese Knotweed (*Fallopia japonica*) or Himalayan balsam (*Impatiens glandulifera*), on the site.

3.2 SPECIES

An assessment was carried out into the suitability of the site and adjacent areas for a number of animal species including those listed under the Conservation of Habitats and Species Regulations 2010 (as amended); the Wildlife and Countryside Act 1981 (as amended); the Natural Environment and Rural Communities (NERC) Act 2006 Section 42 Habitats or Species of Principle Importance for Conservation of Biological Diversity in Wales; UK Biodiversity Action Plan (UK BAP) priority species or Local BAP (LBAP) priority species; Nationally rare or nationally scarce species; and, Species of Conservation Concern (e.g. JNCC Red List, RSPB/BTO Red or Amber Lists).

The data search showed no records of priority species or species of conservation concern within the immediate area; there is an historic record of hedgehog, approximately 220m away and also a record of badger.

Bats

There are no trees on or adjoining the site that would be suitable for a bat roost; there are no records of a bat roost in any of the nearby houses or the chapel.

The derelict building in the south-eastern corner was assessed for bat potential. This is a single storey, single-skinned concrete block building with internal rendering. There is no roof on the building, which consists of a line of individual compartments (perhaps for pigs or calves) and no wall on the southern or northern ends; as a result, the building is exposed to the weather and very light during the day. It is considered that there is no potential for a bat roost in the building.

The northern and eastern boundaries are potentially suitable commuting corridors for bats, with linkages to foraging habitat in the wider landscape. The site itself does not provide suitable bat feeding habitat.

Overall, it is considered that there will be no negative impact on the local bat population as a result of the proposed development.

Birds

The boundary hedges to the east and north provide suitable nesting and feeding habitat for songbirds. There may also be potential nesting opportunities within the derelict building for birds such as wrens or robin. The building is unsuitable for barn owls (and no evidence of this species was found).

It is considered that there will be no negative impact on the local bird population as a result of the proposed development; most of the eastern boundary hedge will be retained, additional habitat will be created as part of the development and mitigation measures will be included for removal of the roadside hedge and demolition of the building.

Badgers

The site was assessed for badger activity (including tracks, latrines, snuffle holes and more extensive digging). There was no sign of badgers within the survey area or the adjacent land.

Other Notable Species

There is no suitable habitat for reptiles within the site. The concrete hard-standing next to the buildings is used by vehicles and stored materials are regularly disturbed; the adjoining grassland and buildings are unsuitable habitat for these species.

The roadside hedge is poorly connected into the wider landscape, is regularly trimmed and is at the end of a long section of roadside hedge which is also trimmed tightly. It is not considered suitable habitat for dormice.

4.0 RECOMMENDATIONS FOR FURTHER SURVEY WORK

4.1 There are no recommendations for further survey work under the current proposals.

5.0 MITIGATION AND ENHANCEMENT

5.1 MITIGATION

The Mitigation Hierachy has been considered as part of the site development, as follows:

1. **Avoid** – the site is included within the LDP and the development has been designed specifically for this location. The land has low ecological value and development will enable a number of biodiversity enhancements to be included.
2. **Minimise** – the development has been designed to utilise the area but to avoid an impact on ecological features.
3. **Rehabilitate / restore** – ecological enhancements will be included that will restore areas of agricultural grassland on the site to provide biodiversity value.
4. **Offset** – unnecessary.

Mitigation measures are included, as follows:

<u>Hedge Removal & Translocation</u>

The section of roadside hedge (A) to be removed will be coppiced down to approximately 200-250mm height outside of the bird nesting season and when plants are dormant over the autumn to winter period (October to late February). This work will be carried out using a chainsaw or hand tools, cutting each stem cleanly on an angle.

A receptor trench (B) will be prepared in advance by removing the turf / topsoil and breaking up the subsoil to reduce compaction. This trench will be of sufficient depth to take the roots of the translocated hedge, typically 600-900mm deep and 1200mm width.

Each coppice stool will be lifted using a mechanical excavator, retaining as much hedge-bank soil as possible around the roots, and spaced evenly along the receptor trench in the new location. Soil from the original hedge-bank (containing seeds & plant material) will be

carefully placed around the roots to ensure these are well-covered and air pockets kept to a minimum; this will be worked in manually using a spade rather than a machine bucket. Any shortfall will be made up using soil from the site, if available, or with imported topsoil to BS3882, multi-purpose grade material. This will be loose material to ensure there are plenty of air voids and a 10% allowance included for settlement.

To encourage the hedge to re-establish and avoid stressing the plants, the hedge will be well-watered when initially moved and also over the first growing season if the weather is dry. The translocated hedge will be monitored regularly and any plant losses will be replaced with like-for-like species (of local provenance zone 303 / 304) to provide a similar diversity.

The short section of Leylandii hedge to be removed will be cut down outside the bird breeding season and disposed of appropriately. It will not be translocated.

Protection of retained hedge

The retained section of the northern boundary hedge will be protected during construction by fencing off with temporary Heras or orange Netlon fencing to a width of 3m from the outer edge of the hedge. Signage will be put in place along the fence to warn the workforce against storing materials in this area.

Lighting

Light pollution due to increased nocturnal light levels, could potentially have a detrimental impact on the local wildlife, particularly foraging bats and nesting songbirds. Birds will be encouraged to start an earlier dawn chorus or the extra light may even trigger some species, such as robins, to sing during the night. These changes in natural behaviour can impact on bird reproduction. In addition, increased nocturnal light levels can make roosting birds more visible to predators. Unmitigated development could potentially have a detrimental impact on the local songbird population.

A dark corridor will be maintained along the hedge boundaries by controlling any necessary outdoor lighting on the properties with a time / motion sensor to avoid overnight lighting; this will be directed into the site.

Demolition of Building

The building will be demolished over the autumn to winter period to avoid the bird nesting season. If this is delayed until the spring-summer, a check for nesting birds will be made and, if found, the demolition will be postponed until all nesting activity has ended.

5.2 ENHANCEMENT MEASURES

The development includes a number of opportunities for biodiversity enhancement that will provide habitat and make the site more attractive for wildlife. This will also meet Carmarthenshire County Council's requirement that biodiversity enhancements are included in all developments to meet the Authority's Duty of Care under Section 6 of the Environment Act 2016; Planning Policy Wales (PPW) 11, sets out that "*planning authorities must seek to maintain and enhance biodiversity in the exercise of their functions. This means that development should not cause any significant loss of habitats or populations of species, locally or nationally and must provide a net benefit for biodiversity*".

The enhancement measures will be delivered as part of the wider scheme development, however translocation of the roadside hedgerow will be delivered as part of the access works.

The enhancements are shown at Appendix 3 and are described as follows:

i. Landscape planting will provide an overall positive impact on the biodiversity value of a site and the local area. New habitats will be created through planting small areas of native tree and shrub species within the site and, over time, gardens will develop.

ii. A mixed, native hedgerow will be planted along the western boundary from the end of the translocated hedge to the southern end of the site where there is an existing garden hedge. This will improve wildlife linkages and will eventually create approximately 75m of new hedgerow habitat.

Plants should be local provenance (303 seed zone where available but 304 as substitute) to ensure they are better adapted and genetically suited to the locality; this will improve survival rates and avoid problems of poor establishment or of introducing plants that might have different characteristics from local stock, such as coming into leaf or flower at a different time.

The planting mix will comprise:

- Hazel - 30%,
- Holly - 15%
- Field maple (*Acer campestre*) – 15%
- Guelder rose (*Viburnum opulus*) 15%
- Hawthorn – 10%
- Wild privet (*Ligustrum vulgare*) – 5%
- Honeysuckle – 5%

- Dog rose – 5%

iii. Pollinator-friendly plants will be included in the landscape planting for insects and bee bricks will be included in each property, built into a sheltered south or west facing wall

iv. An integral bat box and / or bird nesting box will be included within the wall of each house. Likely boxes will be a Schwegler 1FR bat tube or a brick nest-box (or equivalent). The bat tube will be placed high up (at least 5m above the ground) in a south/ south west-facing wall. The bird box will be placed high up under the eaves in an east or north facing elevation.

6.0 REFERENCES

BS 42020: Biodiversity – Code of Practice for Planning & Development

List of Species & Habitats of Principle Importance for Conservation of Biological Diversity in Wales. Wales Biodiversity Partnership/Welsh Assembly Government.

Carmarthen LBAP

WWBIC/ Aderyn biodiversity data

Defra - MAGIC

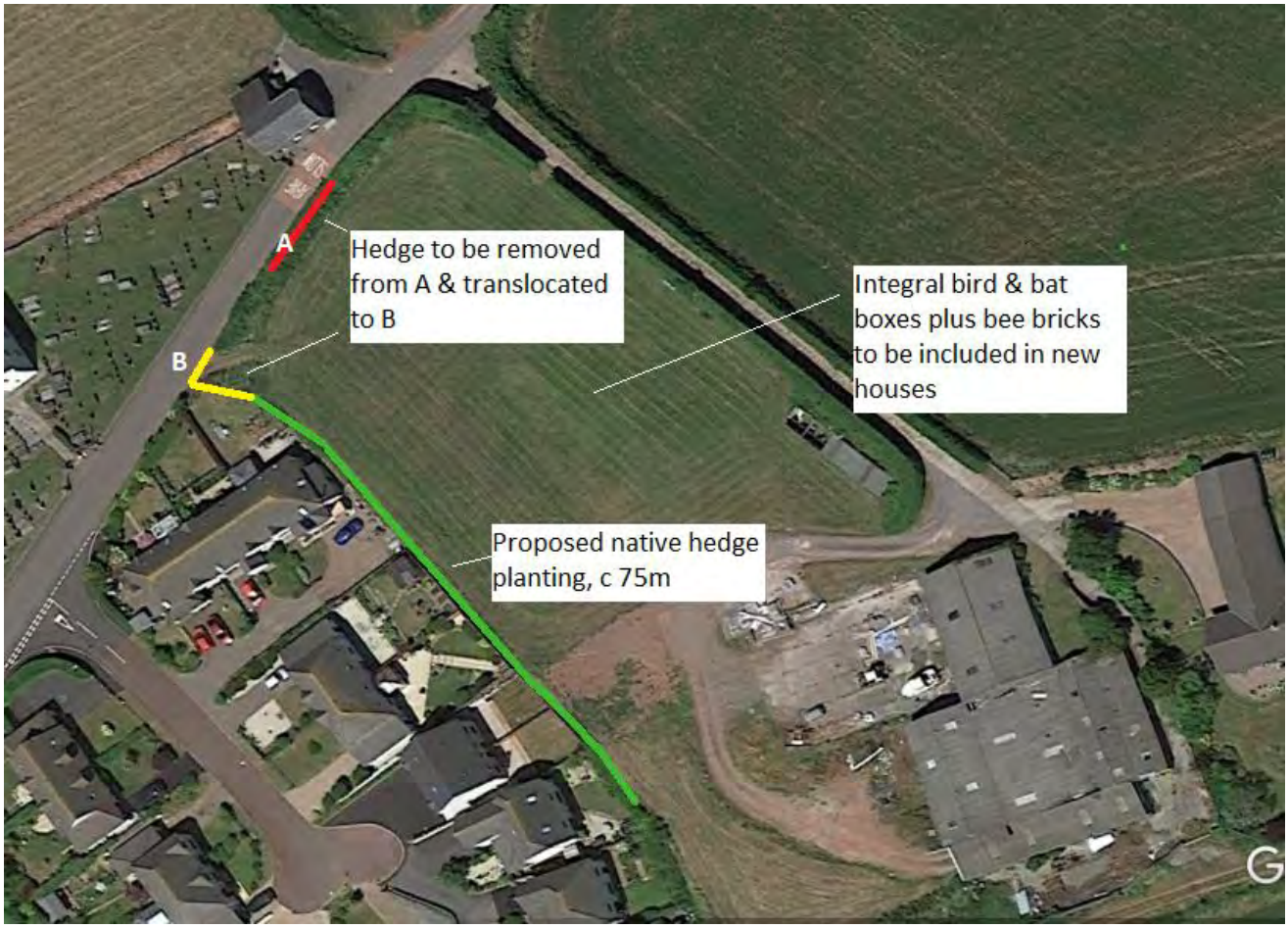
APPENDIX 1 - SITE LOCATION

© Google Earth

Habitat Matters Ltd

APPENDIX 2: HABITAT CLASSIFICATION

© Google Earth



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APPENDIX 4 – SITE PHOTOGRAPHS

1. View north

2. View west

3. View east (Leylandii hedge)

4. Hard-standing area by buildings

5. Derelict building

6. Northern end of building

7. Interior of derelict building

8. Roadside boundary from field

9. Roadside hedge

10. Leylandii hedge

Birds

The Wildlife and Countryside Act 1981 (as amended) makes it an offence (with certain limited exceptions) to intentionally kill, injure or take any wild bird, or to damage, take or destroy the nest of any wild bird whilst that nest is being built or in use, or to take or destroy its eggs. Furthermore, the Act affords additional protection to specific species of birds listed in Schedule 1 of the Act. In respect of these species it is unlawful intentionally or recklessly to disturb such a bird whilst it is nest-building or is in, on or near a nest containing eggs or young; or to disturb their dependent young. Following recent revisions, fifty-nine species are listed on the UKBAP.

Bats

All species of bats and their roosting sites are protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation (Natural Habitats etc.) Regulations 1994, updated and consolidated by the Conservation of Habitats and Species Regulations 2012. All species of UK bats are designated as 'European Protected Species' and are covered by a Species Action Plan within Carmarthenshire LBAP.

Badgers

Badgers and badger setts are protected under The Protection of Badgers Act 1992, which makes it illegal to kill, injure or take a badger, or to interfere with a sett. A sett is defined as "any structure or place which displays signs indicating current use by a badger".

Otters:

The Eurasian Otter is protected under Regulation 41 of The Conservation of Habitats and Species Regulations 2010 and Section 9 of the Wildlife and Countryside Act 1981 (as amended), being listed in Schedule 5 of the act. Under the legislation it is an offence to:

- Deliberately, capture, injure or kill an Otter;
- Damage, destroy or obstruct their breeding or resting places;
- Disturb otters in their breeding or resting places.

Offences under Section 9 carry a maximum penalty of a fine up to £5000, imprisonment for up to six months, or both, for each animal in respect of which an offence is committed. There is, however, provision within the legislation to kill, take, disturb or possess otters or to use prohibited methods to kill or take under a licence in certain defined circumstances, if the issue cannot be resolved by any alternative means. Licenses can be granted for a variety of purposes, including development.

Water Vole:

Water Voles and their habitats are afforded protection under Section 9 of the Wildlife & Countryside Act 1981 (as amended). Under the legislation it is an offence to:

- Intentionally kill, injure or take (capture) a water vole;
- Possess or control a live or dead water vole, or any part of a water vole or anything derived from a water vole;
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place which a water vole uses for shelter or protection
- Intentionally or recklessly disturb a water vole while it is occupying a structure or place which it uses for shelter or protection;
- Sell, offer or expose for sale, or have in one's possession or transport for the purpose of sale, any live or dead water voles, or any part of a water vole or anything derived from a water vole;
- Publish any advertisement, or cause any advertisement to be published, which is likely to be understood as conveying that a person buys or sells, or intends to buy or sell, any of the above things.

Offences under Section 9 carry a maximum penalty of a fine up to £5000, imprisonment for up to six months, or both, for each animal in respect of which an offence is committed.

Invasive Species

Japanese Knotweed is listed under Schedule 9, Part 11 of the Wildlife and Countryside Act 1981, making it an offence to plant or otherwise cause it to grow in the wild. Care should be taken to avoid bringing in or removing material contaminated with Japanese Knotweed during the site development.

Reptiles

There are four widespread species of British reptile, comprising grass snake (*Natrix natrix*), slow-worm (*Anguis fragilis*), adder (*Vipera berus*) and common lizard (*Zootoca vivipara*). These animals are protected under the Wildlife and Countryside Act 1981 (as amended). They are given so called 'partial protection', which prohibits the deliberate killing or injury of individuals. The habitats of common reptiles are not specifically protected.

Environment Act (Wales) 2016

The Environment (Wales) Act 2016 replaced the NERC (2006) Act in 2016. This now imposes a stronger duty for Local Authorities to maintain and enhance biodiversity. Planning Policy Wales (PPW) 11 sets out that "*planning authorities must seek to maintain and enhance biodiversity in the exercise of their functions. This means that development should not cause any significant loss of habitats or populations of species, locally or nationally and must provide a net benefit for*

biodiversity". This policy and subsequent policies in Chapter 6 of PPW 11 respond to the Section 6 Duty of the Environment (Wales) Act 2016.

Hedgerows Regulations 1997

These regulations came into force to protect important hedgerows in the countryside, in particular hedgerows which are more than 20 metres long or those which meet another hedgerow at either end. **It should be noted that hedgerows which form the curtilage of a dwelling are exempt.**

Appendix 8

Drainage Strategy

DRAINAGE STRATEGY AND FLOOD RISK

for

LAND AT MAES Y MEILLION FARM, LLANYBRI, CARMARTHEN SA33 5HF

REF: INT22182-DS1

MARCH 2023

Prepared by:

Intrado

[redacted]

Tel: [redacted]

Email: [redacted]

Status		Prepared		Checked		Approved	
Issue	Rev	Name	Date	Name	Date	Name	Date
First	0	K. M. Griffiths	31.03.2023	D.Sparkes	31.03.2023	C. L. Cooke	31.03.2023
Second							
Third							
Fourth							

REGISTERED IN ENGLAND AND WALES NO. 05785608

CONTENTS

1. Introduction

Intrado Consulting Engineers have been appointed to prepare an engineering report for a proposed highway which will serve a future residential development at Land at Maes y Meillion Farm, Llanybri, Carmarthenshire SA33 5HF.

This report is produced for the sole benefit of Mr. Dafydd Rhodri Davies from whom it was commissioned and has been prepared in response to their requirements and brief. This report may not be relied upon by any other party.

The Contracts (Rights of Third Parties) Act 1999 shall not apply to this report and the provisions of the said Act are expressly excluded from this report. This report may not be used for any purpose other than that for which it was commissioned.

This report may not be reproduced and/or made public by print, photocopy or any other means without the prior written permission of Intrado Consulting Engineers.

2. The Site

The current proposals include a 5.5m minimum width highway circa 110m long which will serve 13 dwellings. Note that this report considers the highway proposals only as the private dwelling drainage is to be covered under a separate SAB application in the future.

The National Grid reference for the site is SN339128 (233971mE, 212801mN).

The site is approximately 0.59 hectares.

Figure 1 – Site Location Plan

3. Flood Risk

3.1 Flood Risk

Fluvial/Tidal Flood Risk

As shown in Figure 2, the site is located in an area which is currently not at risk of flooding from either surface water, small watercourses, rivers or tidal flows.

Surface Water Flood Risk

Surface water flooding occurs when rain falling on saturated ground flow overland, following the local topography. Surface water flooding and subsequent overland flow can also originate from surcharging blocked sewers or drains. Depending on the return period, sewer flooding can also occur from overloading of sewers due to their flow conveyance capacity being exceeded. This typically occurs in events exceeding a 1 in 30 year event. Overland flow can therefore pose a risk to both the development site and surrounding land. Overland flows may originate from the site itself or adjoining land at the higher elevation from which flow migrates onto the development area.

Figure 2 – Extract from Natural Resources Wales Flood Maps

4. Proposed Drainage

Surface Water

The surface water run-off arising from the development is to be managed through the use of Sustainable Drainage Systems (SuDS) integrated with the landscape strategy.

Surface water run-off destination
With reference to Schedule 3 the hierarchy of preferred disposal options are as Standard 1 which are as follows:

Priority Level 1 – Surface water is collected for reuse
Priority Level 2 - Surface water is infiltrated to the ground
Priority Level 3 - Surface water run-off is discharged to a surface water body
Priority Level 4 - Surface water run-off is discharged to a surface water sewer, highway drain, or another drainage system
Priority Level 5 - Surface water run-off is discharged to a surface water combined sewer.

Priority Level 1 – Collection for reuse

As the scheme comprises of a single length of highway this is currently not a viable option.

Priority Level 2 – Infiltration

As indicated in section 4.0 of Appendix A, a design infiltration rate of $2.27x10^{-5}$ has been applied to the porous highway which has enabled infiltration to be used as a viable means of discharging surface water.

Priority Level 3 – Discharge to a surface water body.

Current proposals satisfy Priority Level 2 as a means of surface water discharge.

Priority Level 4 – Discharge to a surface water sewer.

Current proposals satisfy Priority Level 2 as a means of surface water discharge.

4.1 Surface water run-off hydraulic control

During the majority of rainfall events on greenfield sites there is no runoff leaving the site boundary due to losses such like evapotranspiration and groundwater recharge. Therefore, interception mechanisms are based on runoff retention such as evapotranspiration and infiltration processes and rainwater collection for re-use. The interception of runoff is usually applied to the first 5mm of rainfall, which is also considered to be the most polluted runoff from development sites (referred to as 'first flush'). In an aim to as far as practicably possible, prevent discharge from the site for the majority of rainfall events less than 5mm the drainage strategy uses a raingardens, planters and permeable paving.

It is proposed to manage the surface water run-off from the development via the following interception mechanisms as summarised in Table 4-1.

SuDS Management Train Mechanism	Application	Potential Suitable Suds Features
Source Control	For the interception of surface water run-off at the source of the roof and drives.	Permeable asphalt
Conveyance	To convey surface water run-off from 'Source Control' mechanisms to 'Site Control'	Permeable asphalt
Site Control	Provides the required surface water attenuation prior to controlled discharge to the culvert	Permeable asphalt

Table 4-1 Summary of Surface Water Management Strategy SuDS Options

Should a storm event occur which exceeds the design event or any blockages/failures cause surface water flooding the surface water would hold on the surface of the highway before discharging to the infiltration basin at the Southern end of the site and/ or to the gullies fronting the development which discharge surface water directly to the ground below.

The hydraulic calculations for the surface water design can be found in Appendix D.

4.2 Water Quality

Standard S3 requires the design to minimise the potential pollution risk posed by the surface water to the receiving water body.

Table 4-1 sets out the Pollution Hazard Indices for land use in the proposed development as taken from Section 26 of The SuDS Manual the surface.

Land Use	Pollution Hazard Level	Pollution Hazard Indices		
		Total Suspended Solids (TSS)	Metals	Hydro-Carbons
Individual property driveways, residential car parks, low traffic roads (e.g. cul de sacs, home zones and general access roads) <300 traffic movements/day	Low	0.5	0.4	0.4

Table 4-1 - Pollution Hazard Potential for Proposed Development

The proposed drainage is required to demonstrate sufficient treatment capability to manage the specified Pollution Hazard Indices.

Type of SuDS component	Mitigation Indices			Sufficient Mitigation Applied
	Total Suspended Solids (TSS)	Metals	Hydro-Carbons	
Permeable Paving/ Asphalt	0.7	0.6	0.7	Yes

Table 4-2 - Mitigation Indices

The surface water runoff arising from the highway will receive treatment from the permeable asphalt prior to discharging to the groundwater network below via infiltration. In accordance with Table G3.3 of the National Standards for SuDS in Wales permeable paving/ asphalt is considered to be both an interception stage and a primary treatment stage.

The SuDS Mitigation Indices provided by the proposed 'Source Control', 'Conveyance' and 'Site Control' measures for a discharge to surface waters have been compared against the Pollution Hazard Indices and are deemed sufficient.

5. Principal Operation and Maintenance Requirements.

The National SuDS Standards state that components must be designed to ensure structural integrity of the drainage system and any adjacent structures or infrastructure under anticipated loading conditions over the design life of the development taking into account the requirement for reasonable levels of maintenance.

It is proposed that the drainage system relating to the new highway shall be adopted by Carmarthenshire County Council Highway Department.

The future development relating to the dwellings will be subject to an additional SAB application and is not considered at this time.

The permeable asphalt has been designed in accordance with standard details and for Category D which is predominantly car access with 10 large goods vehicle per week. This requires a minimum of 300mm of coarse graded aggregate, this has been increased to 720mm to allow for storage requirements (refer to the construction details within Appendix E).

A maintenance plan detailing the general operation and maintenance requirements for all components of the proposed drainage system has been prepared to ensure the systems remain operational and effective for the lifetime of the development.

Maintenance of the surface water drainage for this site, should be carried out in line with a site-specific management plan (refer to INT22182-MP1 Drainage Maintenance Plan).

The surface water runoff will need to be managed during the construction stage of the development to minimise the risk of flooding and pollution to the surrounding environment.

Under the construction (Design and Management) Regulations (CDM 2015) it is the designer's duty to:

- eliminate foreseeable health and safety risks to anyone affected by the project;
- take steps to reduce or control any risks that cannot be eliminated;
- communicate, cooperate and coordinate with the client, other designers and contractors involved in the project so that designs are compatible, and health and safety risks accounted for during the project and beyond

The potential significant hazards and risks associated with the construction, operation and maintenance of the proposed drainage system, have been identified during the design process and pose a low risk to a competent contractor and maintenance company.

6. Conclusion

Intrado has been appointed to develop a Flood Risk Assessment and Surface Water Drainage Strategy to manage surface water run-off resulting from the proposed highway development at Land at Maes y Meillion Farm, Llanybri, Carmarthenshire, SA33 5HF.

The potential sources of flood risk at the site have been confirmed with the conclusion that the flood risk to the site was predominantly very low and warrant no further consideration or specific mitigation measures to be applied.

Technical information provided in this report on behalf of the Applicant seeks to demonstrate that a robust and sustainable drainage strategy has been prepared for the site, including residual events. It is proposed that the surface water run-off arising from the development discharges to the surface water sewer.

The surface water drainage strategy presented in this report demonstrates that adequate SuDS space provision is afforded within the development and that the proposed scheme is feasible and compliant to appropriate best practice and regulatory requirements and can be maintained in accordance with best practise. It is considered that the proposals ensure the safe management and maintenance of surface water run-off.

Appendix A

TERRA FIRMA GEOTECHNICAL LETTER REPORT 15590

Our Ref: IB/15590/Let 1

Your Ref:

Contact: Ieuan Brooks

Terra Firma (Wales) Ltd.
Consulting Geotechnical & Geo-Environmental Engineers
Site Investigation Contractors

[redacted]

2nd June 2020

Dafydd Rhodri Davies
[redacted]

For the attn. of Mr Dafydd Rhodri Davies

Dear Dylan,

IN-SITU INFILTRATION TESTING: LAND AT MAES Y MEILLION FARM, LLANYBRI, CARMARTHEN

1.0 Introduction

Dafydd Rhodri Davies is proposing the residential development of a site at Maes Y Meillion Farm, in the village Llanybri in Carmarthenshire SA33 5HF. The development area is situated to the eastern edge of the village. A farm barn/warehouse is situated adjacent to the south eastern corner of the site.

Terra Firma Wales Ltd have been commissioned by CB3 Consult Ltd on behalf of Mr Dafydd Rhodri Davies to undertake a day of soakaway testing at the site.

CB3 Consult Ltd is the Consulting Civil and Structural Engineers for the proposed development.

The site location and layout are seen in **Drawing 01** and **Drawing 02** respectively.

1.1 Limitations and Exceptions of Investigation

Dafydd Rhodri Davies has requested that in-situ soakaway testing be performed at the site. The report has been conducted and this report has been prepared for the sole internal reliance of Mr Dafydd Rhodri Davies and his design team. This report shall not be relied upon or transferred to any other parties without the express written authorisation of Terra Firma (Wales) Limited. If an unauthorised third party comes into possession of this report, they rely on it at their peril and the authors owe them no duty of care and skill.

The report represents the findings and opinions of experienced geotechnical and geo-environmental consultants. Terra Firma (Wales) Limited does not provide legal advice and the advice of lawyers may also be required. The subsurface geological profiles, any contamination and other plots are generalised by necessity and have been based on the information found at the locations of the exploratory holes and depths sampled and tested.

2.0 Site Work

The site works were undertaken on 5th May 2020 and comprised the excavation of five trial pits for the soakage tests.

The trial pits were excavated using a 8 Ton tracked excavator with a 300mm wide bucket. The position and approximate target depths of the soakage tests was determined by CB3 Consult Ltd.

The fieldworks were supervised by Terra Firma (Wales) Limited, who also logged the trial pits to the requirements of BS5930:2015. The soakaway tests were conducted to the requirements of BRE365.

The trial pit logs are presented in **Annex A** and their locations are shown on **Drawing 02**.

3.0 Ground Conditions

Table 3.1 Summary of Ground Conditions

Depth (m)			Thickness (m)	Stratum
GL	-	0.3/0.35	0.3/0.35	Firm brown and black sandy **CLAY** Many fine rootlets. With plastic sheeting. And plastic piping. SA2 and SA6. **(Made Ground)**
GL	-	0.1/0.15	0.1/0.15	Firm Brown sandy **CLAY** with fine rootlets.
0.15/0.3	-	0.4/1.10	0.25-1.4	Firm/Stiff reddish brown sandy very gravelly **CLAY**. **(Milford Haven Group)**
0.1/1.3	-	1.3/1.4	0.6-1.4	Medium dense to dense? Reddish brown angular clayey fine to coarse angular **GRAVEL** of sandstone and marlstone in places. **(Milford Haven Group)**
0.4/1.3	-	1.4/2.15	NA	Excavated as Medium dense to dense? Reddish brown fine to coarse angular GRAVEL of **SANDSTONE** and rare **MARLSTONE**. (Weathered Bedrock) **(Milford Haven Group)**

Note

- No groundwater was encountered during the investigations.

4.0 In-situ Soakaway Test Results

Soakaway tests were undertaken at five locations on the site.

The soakaway SA2 did not achieve 75% outflow within the working day, this slow infiltration rate is likely due to the underlying clay strata and made ground in this area.

Three fills were achieved in the SA1 SA3, SA5 and SA6 and the following infiltration rates have been calculated:

Table 4.1 Soakaway Test Results

Trial pit	Depth to Base (m)	Test	Rate of Infiltration
SA1	1.9	Fill 1	8.73 x10^{-5}m/s
SA1	1.9	Fill 2	6.50 x10^{-5}m/s
SA1	1.9	Fill 3	7.03 x10^{-5}m/s
SA2	1.67	Fill 1	75% outflow not achieved
SA3	1.27	Fill 1	4.40 x10^{-5}m/s
SA3	1.27	Fill 2	2.27 x10^{-5}m/s
SA3	1.27	Fill 3	2.58 x10^{-5}m/s
SA5	1.54	Fill 1	4.81 x10^{-5}m/s
SA5	1.54	Fill 2	3.37 x10^{-5}m/s
SA6	1.54	Fill 3	3.24 x10^{-5}m/s
SA6	2.05	Fill 1	2.23 x10^{-4}m/s
SA6	2.05	Fill 2	1.12 x10^{-4}m/s
SA6	2.05	Fill 3	1.25 x10^{-4}m/s

We trust that the above is to your satisfaction, however, if you have any queries or require any further information please do not hesitate to contact us.

Yours sincerely
for: Terra Firma (Wales) Ltd

[redacted]

Ieuan Brooks

enc.
Annex A - Trial Pit Logs
Annex B – Soakaway Calculations
Drawing 01 - Site Location
Drawing 02 - Site Layout

ANNEX A
Trial Pit Logs

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Trial Pit No: SA1
Sheet 1 of 1

Project Name: Llanybri	Project No: 15990	Co-ords: - Level:	Date: 05/05/2020
Location: Llanybri		Dimensions: Depth 2.00 — 1.90 × 0.60	Scale: 1:25
Client: Dafydd Rhodri Davies			Logged: IB

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.10			Brown very sandy CLAY with fine rootlets.
							Medium dense to dense? reddish brown clayey very gravelly SAND with frequent cobbles. Gravels are fine to coarse angular sandstone. (Milford Haven Group)
				1.30			Dense? very sandy clayey fine to coarse angular GRAVEL of sandstone. With rare conglomerate. (Weathered Sandstone Bedrock) (Milford Haven Group)
				2.00			End of Pit at 2.000m

Stability: Trial Pit was stable and cut cleanly.

Remarks: 1. No Groundwater Encountered. 2. Trial Pit backfilled with arisings.

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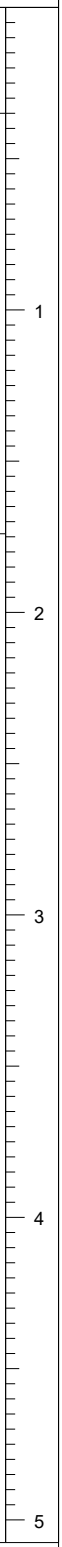
Trial Pit No: SA2
Sheet 1 of 1

Project Name: Llanybri	Project No: 15990	Co-ords: -	Date: 05/05/2020
Location: Llanybri		Dimensions: Depth 1.74 (1.70 × 0.70)	Scale: 1:25
Client: Dafydd Rhodri Davies			Logged: IB

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.35			Firm brown very sandy CLAY with many fine rootlets. Large timber trunk. (Made Ground)
							Firm becoming stiff reddish brown gravelly CLAY. Gravels are fine to coarse angular of sandstone. Gravels increasing with depth. (Milford Haven Group)
				1.74			End of Pit at 1.740m



Stability: Trial Pit was stable and cut cleanly.

Remarks: 1. No Groundwater Encountered. 2. Trial Pit backfilled with arisings.

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Trial Pit No: SA3
Sheet 1 of 1

Project Name: Llanybri	Project No: 15990	Co-ords: - Level:	Date: 05/05/2020
Location: Llanybri		Dimensions: Depth 1.40 (1.50 × 0.65)	Scale: 1:25
Client: Dafydd Rhodri Davies			Logged: IB

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.15			Reddish brown firm sandy CLAY with many fine rootlets.
				0.40			Stiff very gravelly CLAY. Gravels are flat angular marlstone. (Milford Haven Group)
							Excavated as sandy silty flat angular GRAVEL of Marlstone. (Weathered Marlstone bedrock) (Milford Haven Group)
				1.40			End of Pit at 1.400m

Stability: Trial Pit was stable and cut cleanly.

Remarks: 1. No Groundwater Encountered. 2. Trial Pit backfilled with arisings.

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Trial Pit No: SA5
Sheet 1 of 1

Project Name: Llanybri	Project No: 15990	Co-ords: - Level:	Date: 05/05/2020
Location: Llanybri		Dimensions: Depth 1.40 (1.50 × 0.75)	Scale: 1:25
Client: Dafydd Rhodri Davies			Logged: IB

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.15			Firm brown sandy CLAY with many fine rootlets.
				0.50			Medium dense to dense? sandy very clayey angular GRAVELS of mudstone. (Milford Haven Group)
				1.40			Dense? very sandy clayey fine to coarse angular GRAVEL of sandstone. (Milford Haven Group)
							End of Pit at 1.400m

Stability: Trial Pit was stable and cut cleanly.

Remarks: 1. No Groundwater Encountered. 2. Trial Pit backfilled with arisings.

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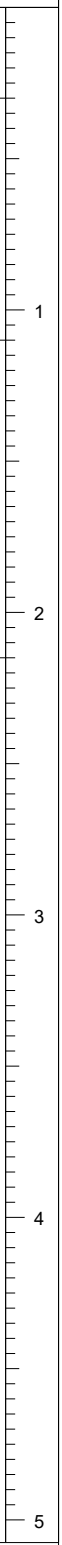
Trial Pit No: SA6
Sheet 1 of 1

Project Name: Llanybri	Project No: 15990	Co-ords: - Level:	Date: 05/05/2020
Location: Llanybri		Dimensions: Depth 2.15 (1.50 × 0.50)	Scale: 1:25
Client: Dafydd Rhodri Davies			Logged: IB

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.30			Firm brown and black CLAY with fine rootlets. With plastic piping. (Made Ground)
				1.10			Stiff reddish brown very sandy gravelly CLAY. (Milford Haven Group)
				2.15			Excavated as Medium dense to dense? reddish brown slightly clayey sandy fine to coarse angular GRAVEL of sandstone. (Weathered Bedrock) (Milford Haven Group)
							End of Pit at 2.150m



Stability: Trial Pit was stable and cut cleanly.

Remarks: 1. No Groundwater Encountered. 2. Trial Pit backfilled with arisings.

ANNEX B
Soakaway Calculations

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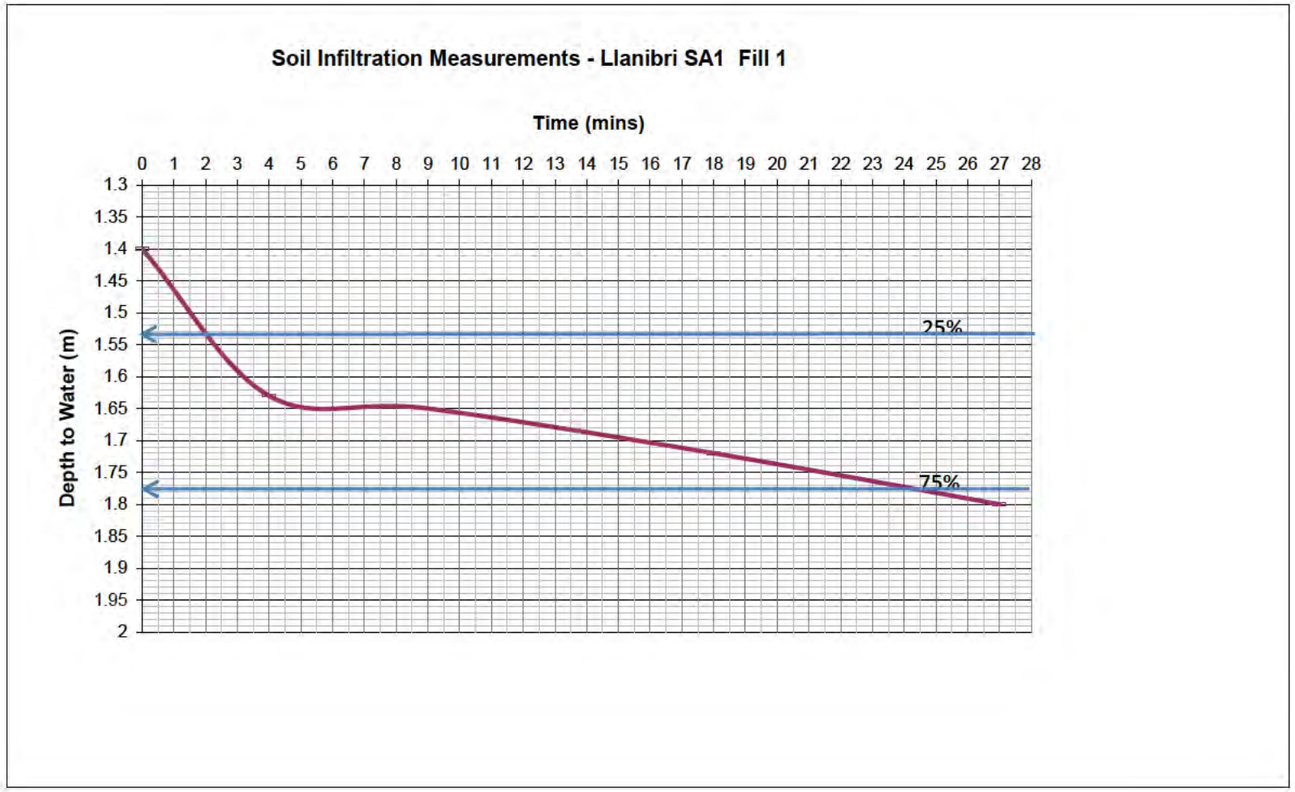
Site Name: Llanibri
Job Number: 15990
Date Undertaken: 05/05/2020
Test No.: SA1 Fill 1

	Depth to Water (m)	Time (Mins)
(Top of test / effective depth - 100%)	1.4	0
	1.63	4
	1.65	9
	1.72	18
	1.8	27
(Base of pit / effective depth - 0%)	1.900	

Length of Trial Pit (m)	1.80	
Width of Trial Pit (m)	0.60	
Depth of Trial Pit (m)	1.90	
Effective Storage Depth (m)	0.500	
Vp25	1.5250	
Vp75	1.7750	
Vp75-25	0.270	
50% effective depth (m)	0.250	
Mean Surface area ap50 (m2)	2.280	
Time for 25% **Outflow** (t_{p25})	1.9	-
Time for 75% **Outflow** (t_{p75})	24.5	-
tp75 - 25	22.6	-
Soil Infiltration Rate (m/s)	**8.73312E-05**	-



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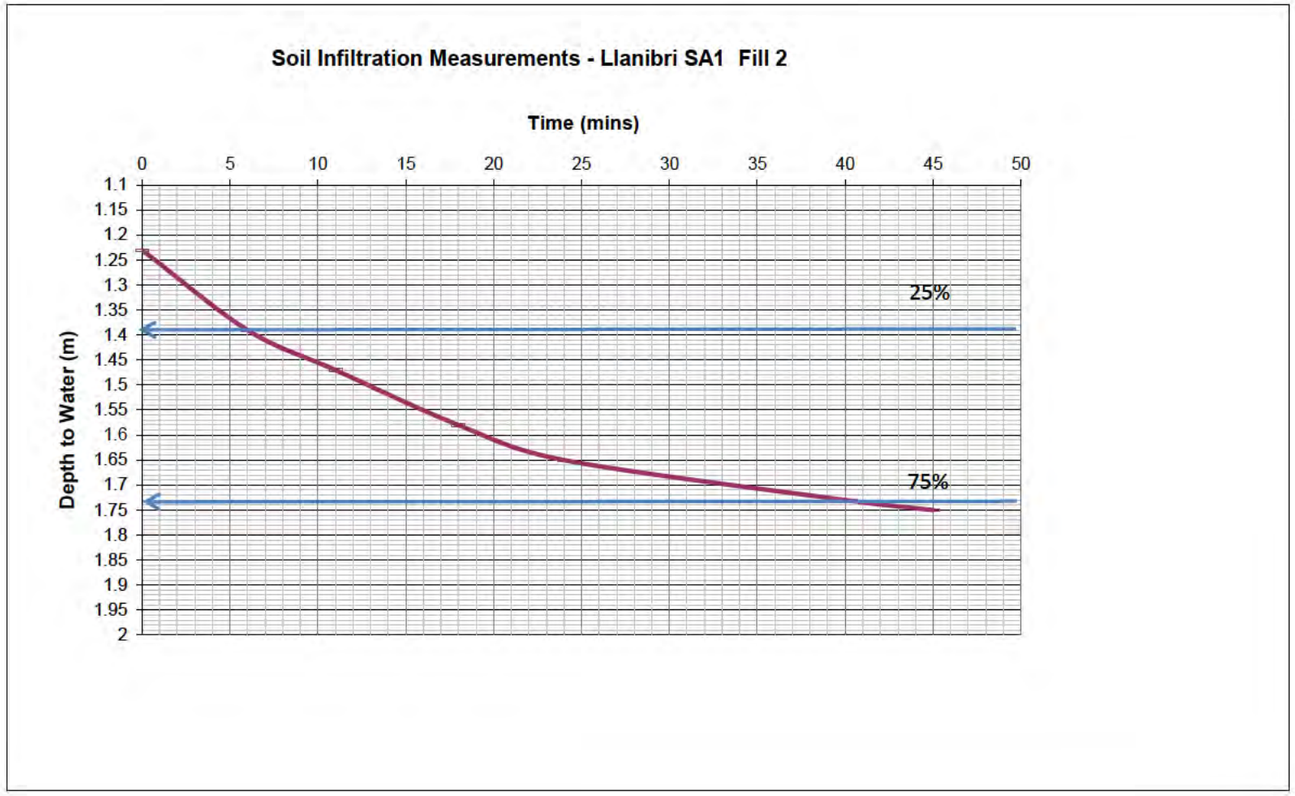
Site Name: Llanibri
Job Number: 15990
Date Undertaken: 05/05/2020
Test No.: SA1 Fill 2

	Depth to Water (m)	Time (Mins)
(Top of test / effective depth - 100%)	1.23	0
	1.39	6
	1.47	11
	1.58	18
	1.65	24
	1.73	40
	1.75	45
(Base of pit / effective depth - 0%)	1.900	

Length of Trial Pit (m)	1.80	
Width of Trial Pit (m)	0.60	
Depth of Trial Pit (m)	1.90	
Effective Storage Depth (m)	0.670	
Vp25	1.3975	
Vp75	1.7325	
Vp75-25	0.362	
50% effective depth (m)	0.335	
Mean Surface area ap50 (m2)	2.688	
Time for 25% **Outflow** (t_{p25})	6	-
Time for 75% **Outflow** (t_{p75})	40.5	-
tp75 - 25	34.5	-
Soil Infiltration Rate (m/s)	**6.50233E-05**	-



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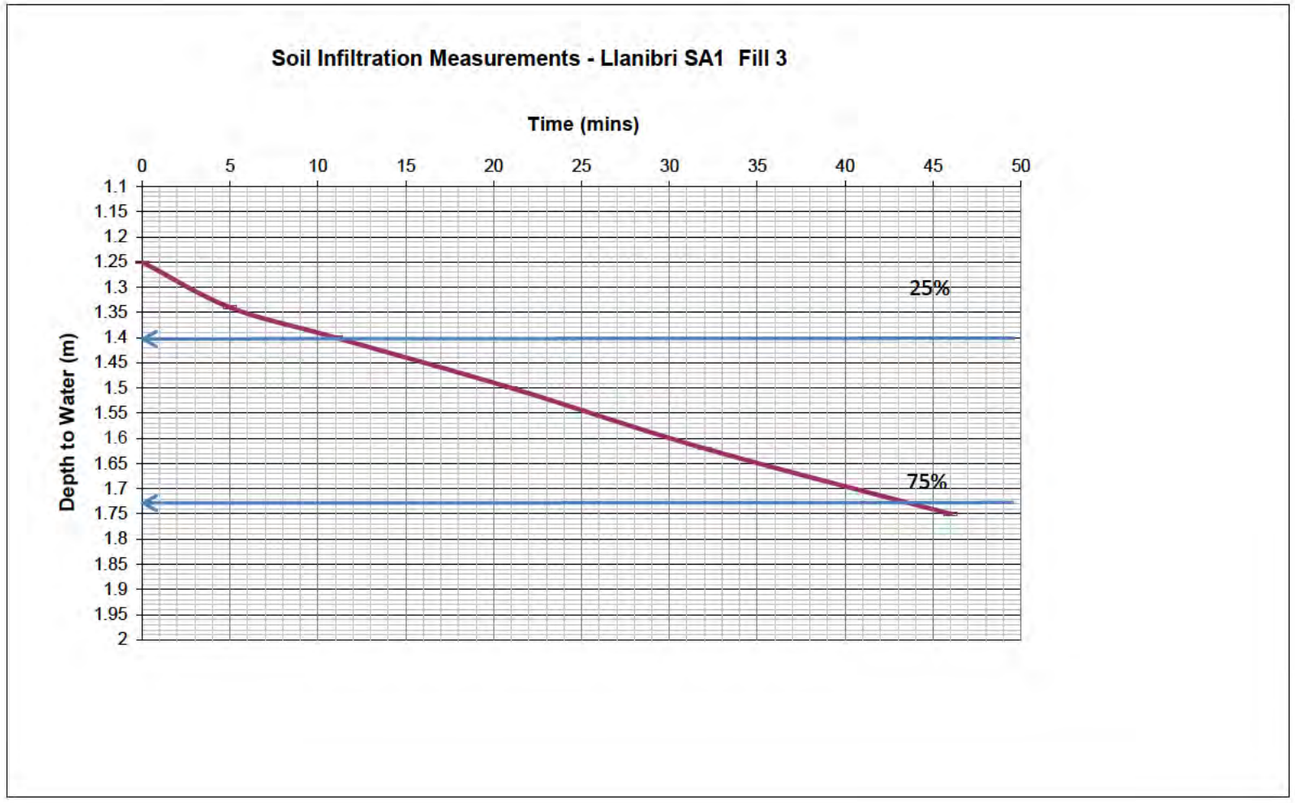
Site Name: Llanibri
Job Number: 15990
Date Undertaken: 05/05/2020
Test No.: SA1 Fill 3

	Depth to Water (m)	Time (Mins)
(Top of test / effective depth - 100%)	1.25	0
	1.34	5
	1.4	11
	1.5	21
	1.62	32
	1.75	46
(Base of pit / effective depth - 0%)	1.900	

Length of Trial Pit (m)	1.80	
Width of Trial Pit (m)	0.60	
Depth of Trial Pit (m)	1.90	
Effective Storage Depth (m)	0.650	
Vp25	1.4125	
Vp75	1.7375	
Vp75-25	0.351	
50% effective depth (m)	0.325	
Mean Surface area ap50 (m2)	2.640	
Time for 25% **Outflow** (t_{p25})	12	-
Time for 75% **Outflow** (t_{p75})	43.5	-
tp75 - 25	31.5	-
Soil Infiltration Rate (m/s)	**7.03463E-05**	-



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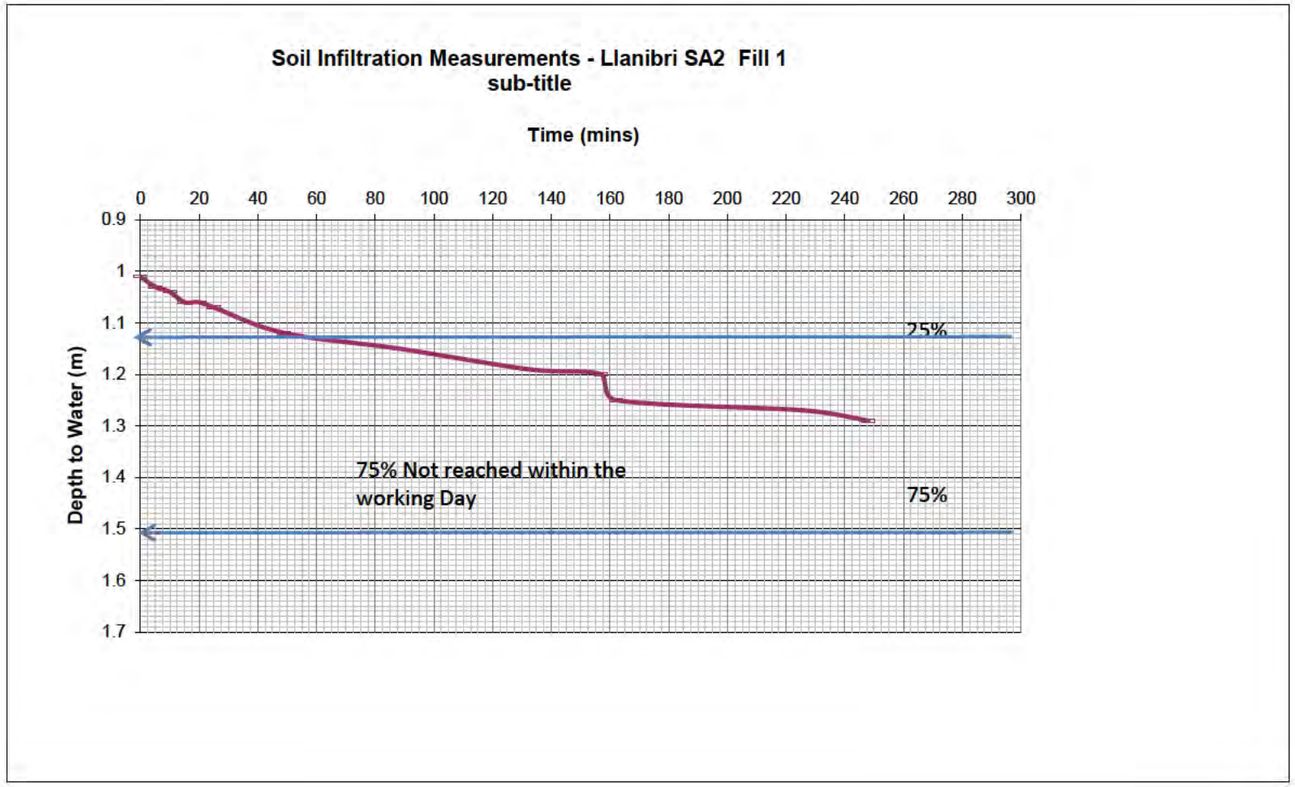
Site Name: Llanibri
Job Number: 15990
Date Undertaken: 05/05/2020
Test No.: SA2 Fill 1

	Depth to Water (m)	Time (Mins)
(Top of test / effective depth - 100%)	1.01	0
	1.03	5
	1.04	10
	1.06	15
	1.06	20
	1.07	25
	1.12	49
	1.15	88
	1.19	132
	1.200	157
	1.250	162
	1.270	226
	1.290	248
(Base of pit / effective depth - 0%)	1.670	

Length of Trial Pit (m)	1.70	
Width of Trial Pit (m)	0.70	
Depth of Trial Pit (m)	1.67	
Effective Storage Depth (m)	0.660	
Vp25	1.1750	
Vp75	1.5050	
Vp75-25	0.393	
50% effective depth (m)	0.330	
Mean Surface area ap50 (m2)	2.774	
Time for 25% **Outflow** (t_{p25})		-
Time for 75% **Outflow** (t_{p75})		-
tp75 - 25	0	-
Soil Infiltration Rate (m/s)	**NA**	-



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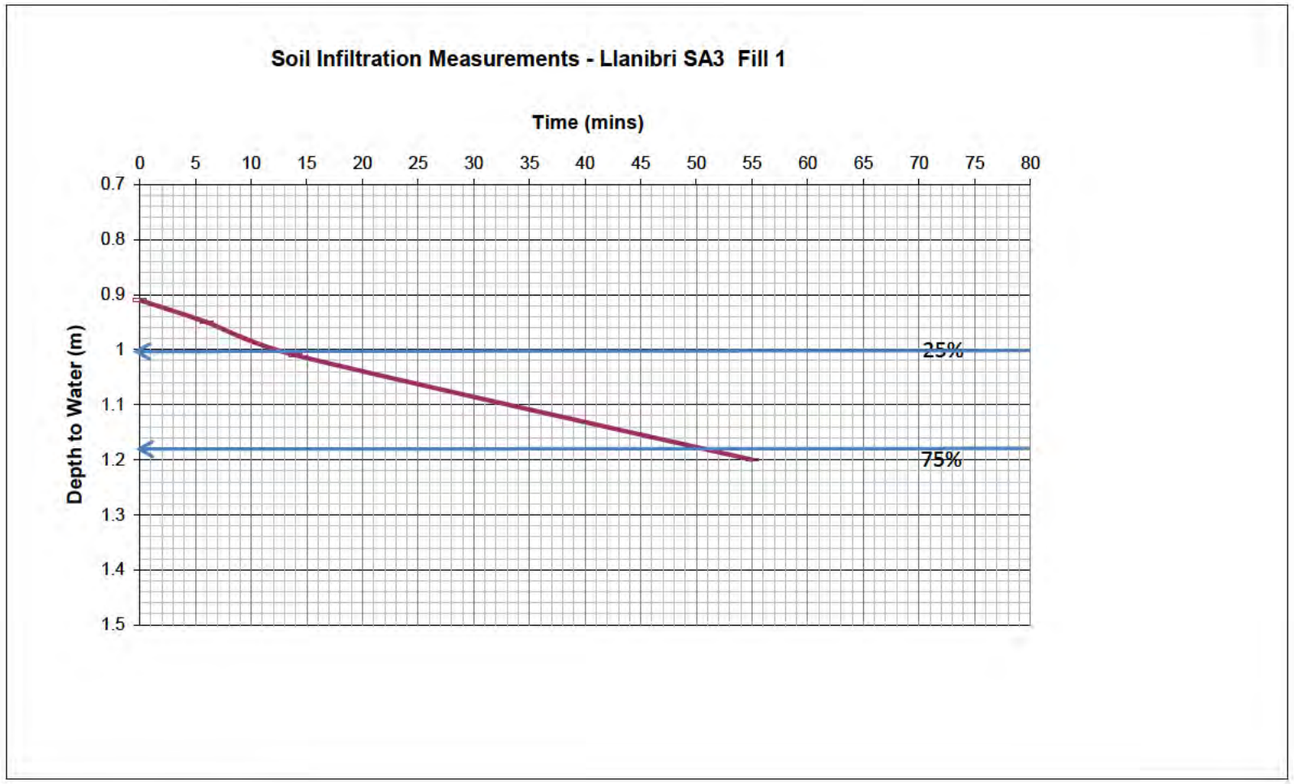
Site Name: Llanibri
Job Number: 15990
Date Undertaken: 05/05/2020
Test No.: SA3 Fill 1

	Depth to Water (m)	Time (Mins)
(Top of test / effective depth - 100%)	0.91	0
	0.95	6
	1.01	14
	1.2	55
(Base of pit / effective depth - 0%)	1.270	

Length of Trial Pit (m)	1.50	
Width of Trial Pit (m)	0.65	
Depth of Trial Pit (m)	1.27	
Effective Storage Depth (m)	0.360	
Vp25	1.0000	
Vp75	1.1800	
Vp75-25	0.176	
50% effective depth (m)	0.180	
Mean Surface area ap50 (m2)	1.749	
Time for 25% **Outflow** (t_{p25})	12	-
Time for 75% **Outflow** (t_{p75})	50	-
tp75 - 25	38	-
Soil Infiltration Rate (m/s)	**4.40101E-05**	-



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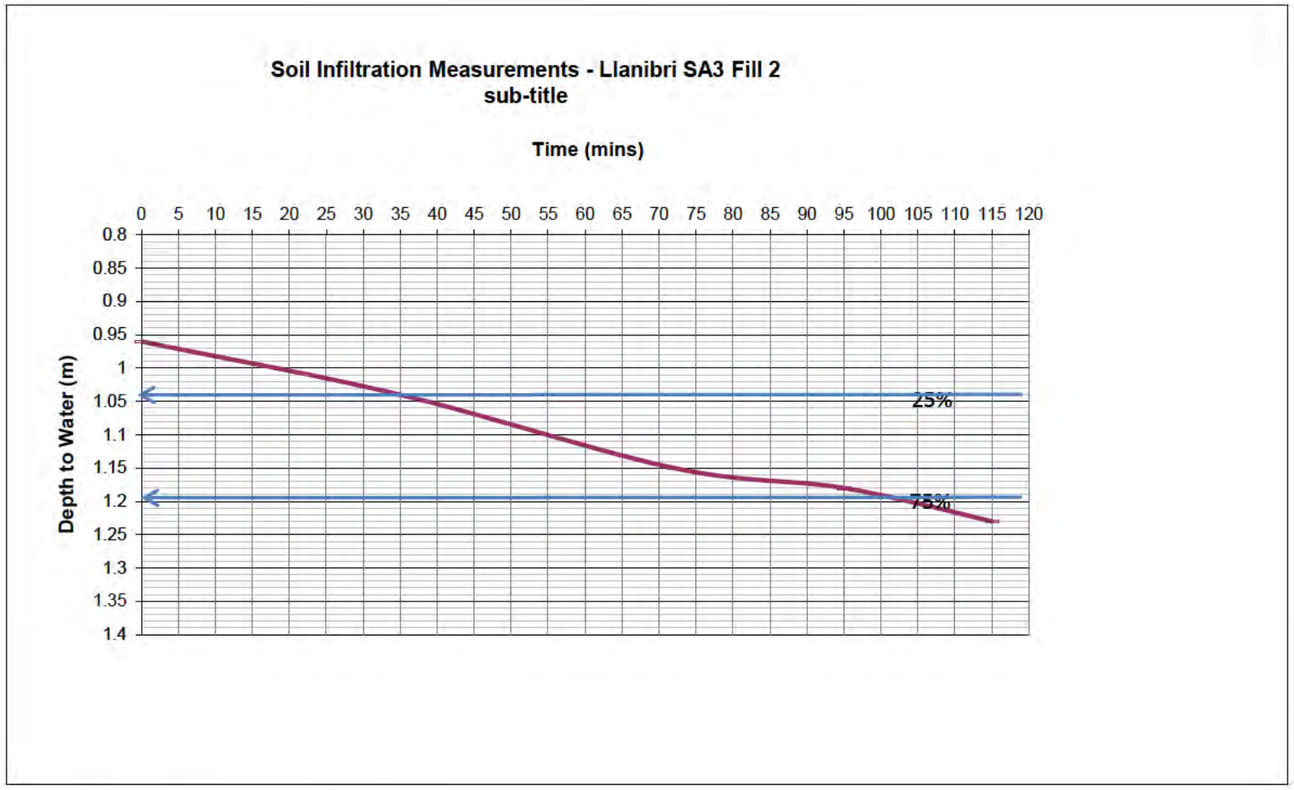
Site Name: Llanibri
Job Number: 15990
Date Undertaken: 05/05/2020
Test No.: SA3 Fill 2

	Depth to Water (m)	Time (Mins)
(Top of test / effective depth - 100%)	0.96	0
	1.04	35
	1.15	72
	1.18	95
	1.23	115
(Base of pit / effective depth - 0%)	1.270	

Length of Trial Pit (m)	1.50	
Width of Trial Pit (m)	0.65	
Depth of Trial Pit (m)	1.27	
Effective Storage Depth (m)	0.310	
Vp25	1.0375	
Vp75	1.1925	
Vp75-25	0.151	
50% effective depth (m)	0.155	
Mean Surface area ap50 (m2)	1.642	
Time for 25% **Outflow** (t_{p25})	32.5	-
Time for 75% **Outflow** (t_{p75})	100	-
tp75 - 25	67.5	-
Soil Infiltration Rate (m/s)	**2.27321E-05**	-



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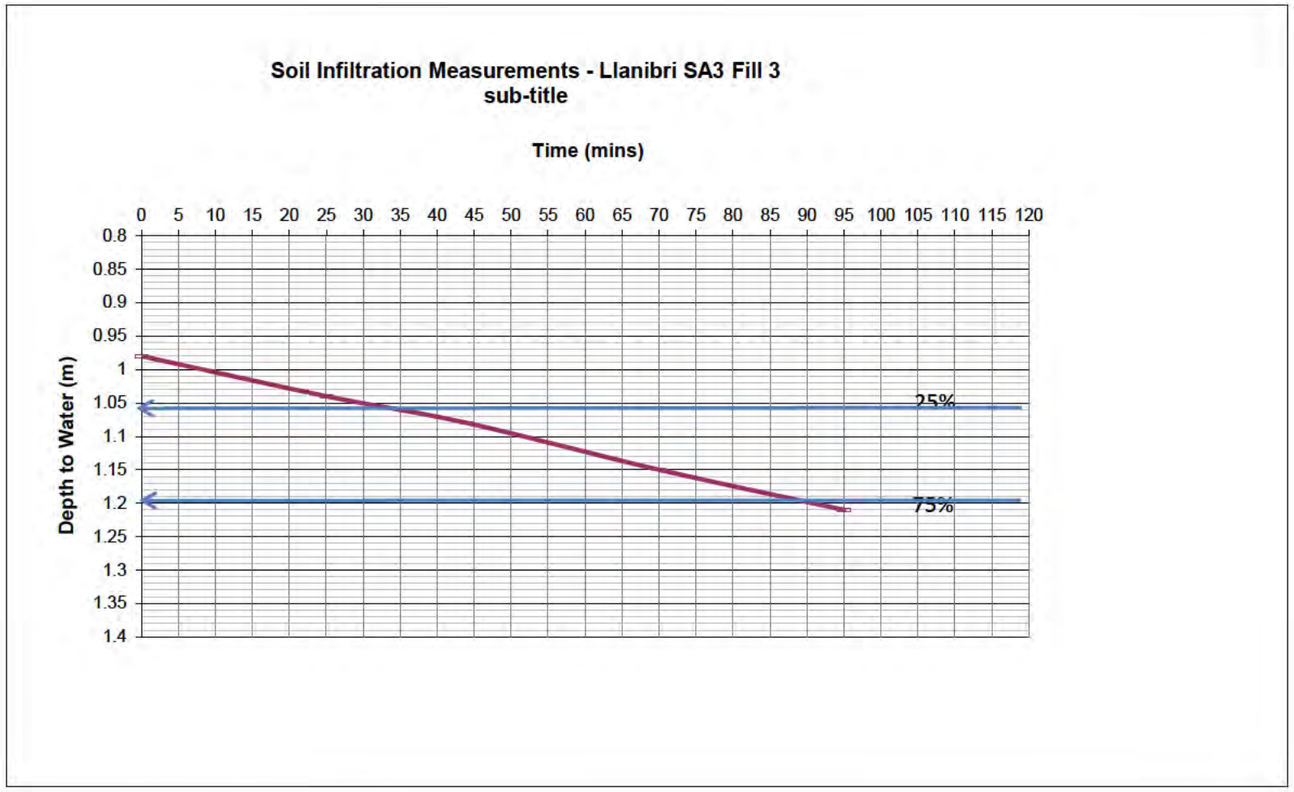
Site Name: Llanibri
Job Number: 15990
Date Undertaken: 05/05/2020
Test No.: SA3 Fill 3

	Depth to Water (m)	Time (Mins)
(Top of test / effective depth - 100%)	0.98	0
	1.04	25
	1.08	44
	1.15	70
	1.21	95
(Base of pit / effective depth - 0%)	1.270	

Length of Trial Pit (m)	1.50	
Width of Trial Pit (m)	0.65	
Depth of Trial Pit (m)	1.27	
Effective Storage Depth (m)	0.290	
Vp25	1.0525	
Vp75	1.1975	
Vp75-25	0.141	
50% effective depth (m)	0.145	
Mean Surface area ap50 (m2)	1.599	
Time for 25% **Outflow** (t_{p25})	31	-
Time for 75% **Outflow** (t_{p75})	88	-
tp75 - 25	57	-
Soil Infiltration Rate (m/s)	**2.58603E-05**	-



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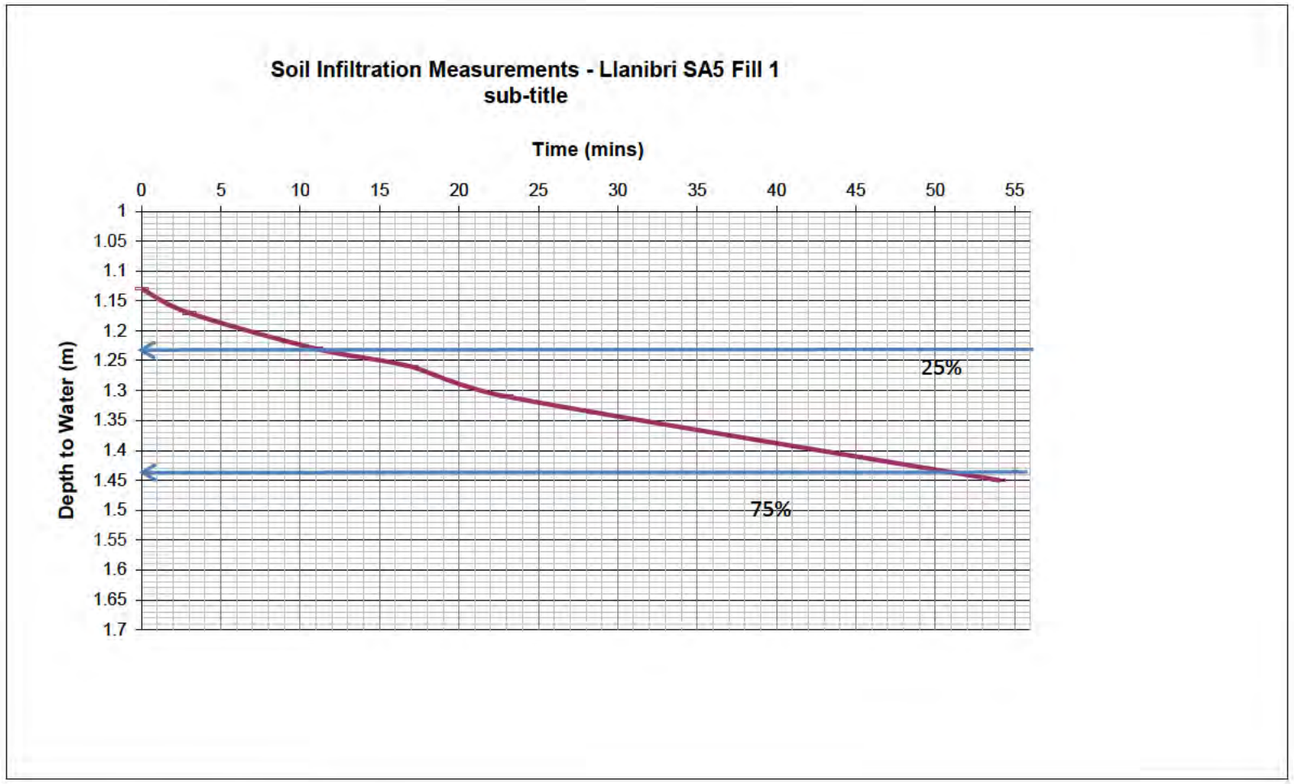
Site Name: Llanibri
Job Number: 15990
Date Undertaken: 05/05/2020
Test No.: SA5 Fill 1

	Depth to Water (m)	Time (Mins)
(Top of test / effective depth - 100%)	1.13	0
	1.17	3
	1.23	11
	1.26	17
	1.31	23
	1.45	54
(Base of pit / effective depth - 0%)	1.540	

Length of Trial Pit (m)	1.50	
Width of Trial Pit (m)	0.75	
Depth of Trial Pit (m)	1.54	
Effective Storage Depth (m)	0.410	
Vp25	1.2325	
Vp75	1.4375	
Vp75-25	0.231	
50% effective depth (m)	0.205	
Mean Surface area ap50 (m2)	2.048	
Time for 25% **Outflow** (t_{p25})	11	-
Time for 75% **Outflow** (t_{p75})	50	-
tp75 - 25	39	-
Soil Infiltration Rate (m/s)	**4.81356E-05**	-



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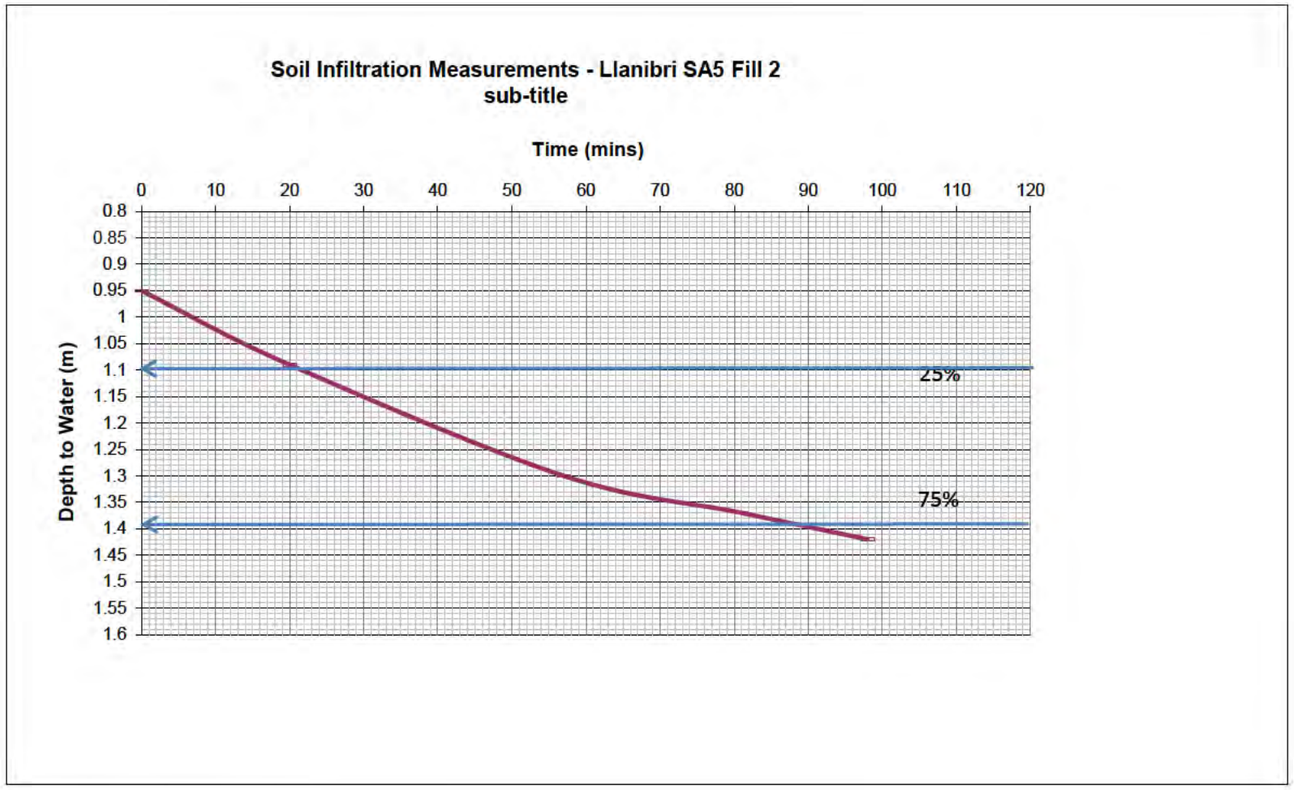
Site Name: Llanibri
Job Number: 15990
Date Undertaken: 05/05/2020
Test No.: SA5 Fill 2

	Depth to Water (m)	Time (Mins)
(Top of test / effective depth - 100%)	0.95	0
	1.09	20
	1.3	57
	1.37	81
	1.42	98
(Base of pit / effective depth - 0%)	1.540	

Length of Trial Pit (m)	1.50	
Width of Trial Pit (m)	0.75	
Depth of Trial Pit (m)	1.54	
Effective Storage Depth (m)	0.590	
Vp25	1.0975	
Vp75	1.3925	
Vp75-25	0.332	
50% effective depth (m)	0.295	
Mean Surface area ap50 (m2)	2.453	
Time for 25% **Outflow** (t_{p25})	21	-
Time for 75% **Outflow** (t_{p75})	88	-
tp75 - 25	67	-
Soil Infiltration Rate (m/s)	**3.3662E-05**	-



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Site Name: Llanibri
Job Number: 15990
Date Undertaken: 05/05/2020
Test No.: SA5 Fill 3

	Depth to Water (m)	Time (Mins)
(Top of test / effective depth - 100%)	0.98	0
	1.05	16
	1.15	38
	1.21	52
	1.3	70
	1.35	83
	1.43	100
(Base of pit / effective depth - 0%)	1.540	

Length of Trial Pit (m)	1.50	
Width of Trial Pit (m)	0.75	
Depth of Trial Pit (m)	1.54	
Effective Storage Depth (m)	0.560	
Vp25	1.1200	
Vp75	1.4000	
Vp75-25	0.315	
50% effective depth (m)	0.280	
Mean Surface area ap50 (m2)	2.385	
Time for 25% **Outflow** (t_{p25})	30	-
Time for 75% **Outflow** (t_{p75})	94	-
tp75 - 25	64	-
Soil Infiltration Rate (m/s)	**3.43947E-05**	-

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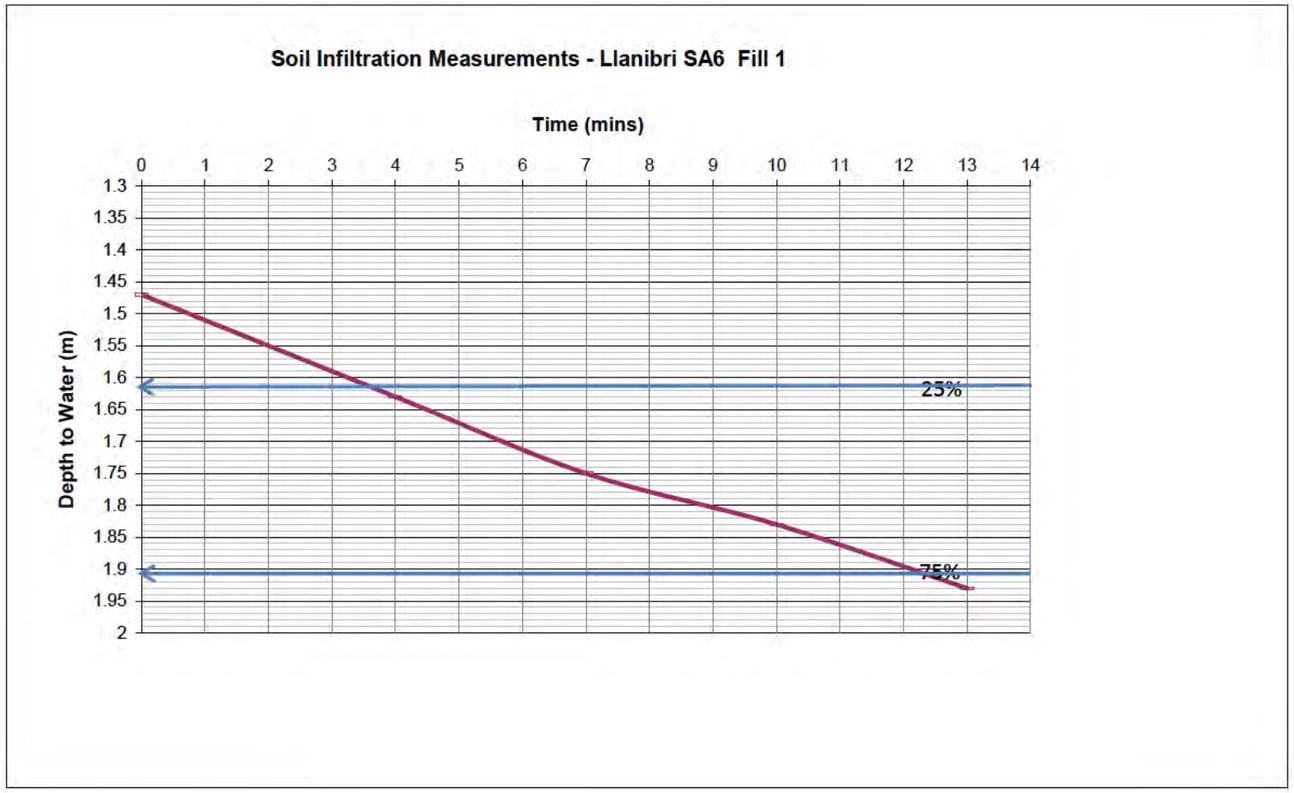
Site Name: Llanibri
Job Number: 15990
Date Undertaken: 05/05/2020
Test No.: SA6 Fill 1

	Depth to Water (m)	Time (Mins)
(Top of test / effective depth - 100%)	1.47	0
	1.63	4
	1.75	7
	1.83	10
	1.93	13
(Base of pit / effective depth - 0%)	2.050	

Length of Trial Pit (m)	1.50	
Width of Trial Pit (m)	0.50	
Depth of Trial Pit (m)	2.05	
Effective Storage Depth (m)	0.580	
Vp25	1.6150	
Vp75	1.9050	
Vp75-25	0.218	
50% effective depth (m)	0.290	
Mean Surface area ap50 (m2)	1.910	
Time for 25% **Outflow** (t_{p25})	3.6	-
Time for 75% **Outflow** (t_{p75})	12.1	-
tp75 - 25	8.5	-
Soil Infiltration Rate (m/s)	**0.000223283**	-



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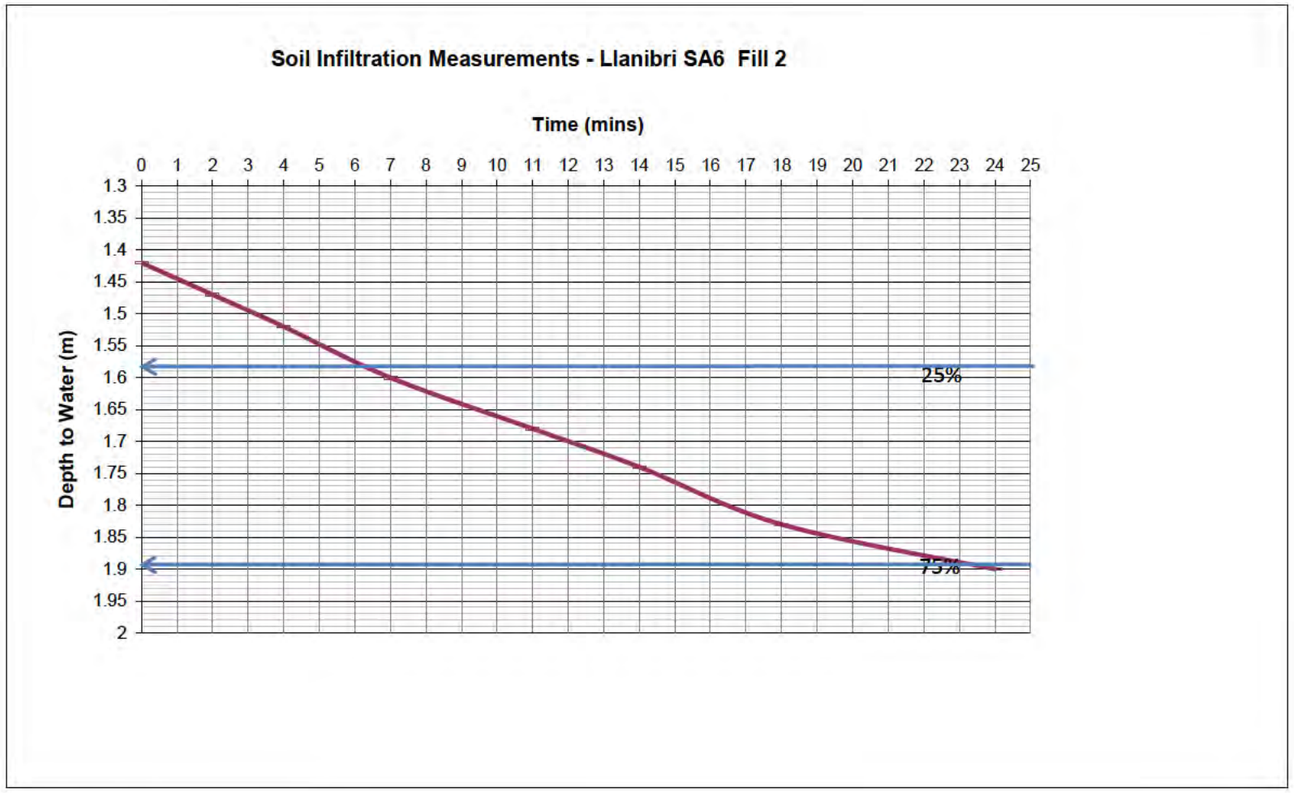
Email: [redacted]

Site Name: Llanibri
Job Number: 15990
Date Undertaken: 05/05/2020
Test No.: SA6 Fill 2

	Depth to Water (m)	Time (Mins)
(Top of test / effective depth - 100%)	1.42	0
	1.47	2
	1.52	4
	1.6	7
	1.68	11
	1.74	14
	1.83	18
	1.9	24
(Base of pit / effective depth - 0%)	2.050	

Length of Trial Pit (m)	1.50	
Width of Trial Pit (m)	0.50	
Depth of Trial Pit (m)	2.05	
Effective Storage Depth (m)	0.630	
Vp25	1.5775	
Vp75	1.8925	
Vp75-25	0.236	
50% effective depth (m)	0.315	
Mean Surface area ap50 (m2)	2.010	
Time for 25% **Outflow** (t_{p25})	6	-
Time for 75% **Outflow** (t_{p75})	23	-
tp75 - 25	17	-
Soil Infiltration Rate (m/s)	**0.000115233**	-



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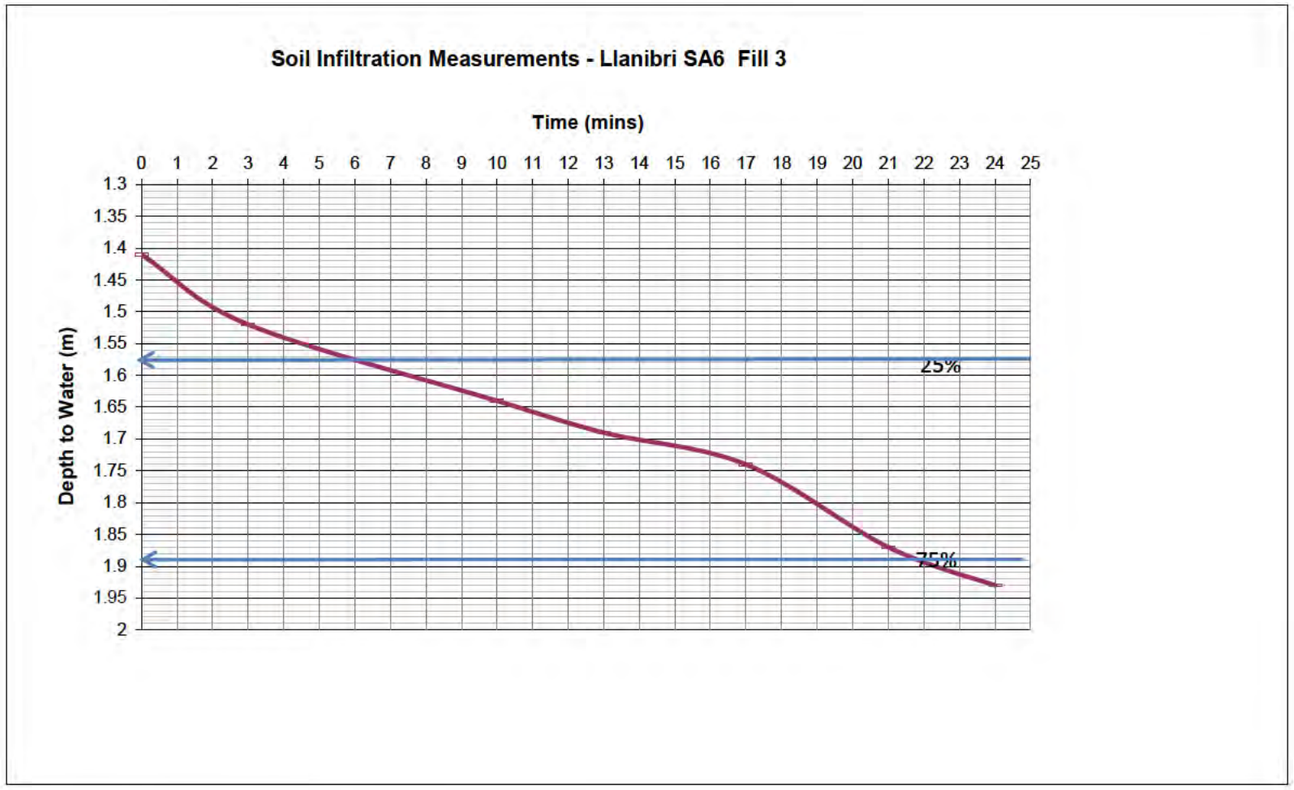
Email: [redacted]

Site Name: Llanibri
Job Number: 15990
Date Undertaken: 05/05/2020
Test No.: SA6 Fill 3

	Depth to Water (m)	Time (Mins)
(Top of test / effective depth - 100%)	1.41	0
	1.52	3
	1.64	10
	1.69	13
	1.74	17
	1.87	21
	1.93	24
(Base of pit / effective depth - 0%)	2.050	

Length of Trial Pit (m)	1.50	
Width of Trial Pit (m)	0.50	
Depth of Trial Pit (m)	2.05	
Effective Storage Depth (m)	0.640	
Vp25	1.5700	
Vp75	1.8900	
Vp75-25	0.240	
50% effective depth (m)	0.320	
Mean Surface area ap50 (m2)	2.030	
Time for 25% **Outflow** (t_{p25})	6	-
Time for 75% **Outflow** (t_{p75})	21.8	-
tp75 - 25	15.8	-
Soil Infiltration Rate (m/s)	**0.000124712**	-



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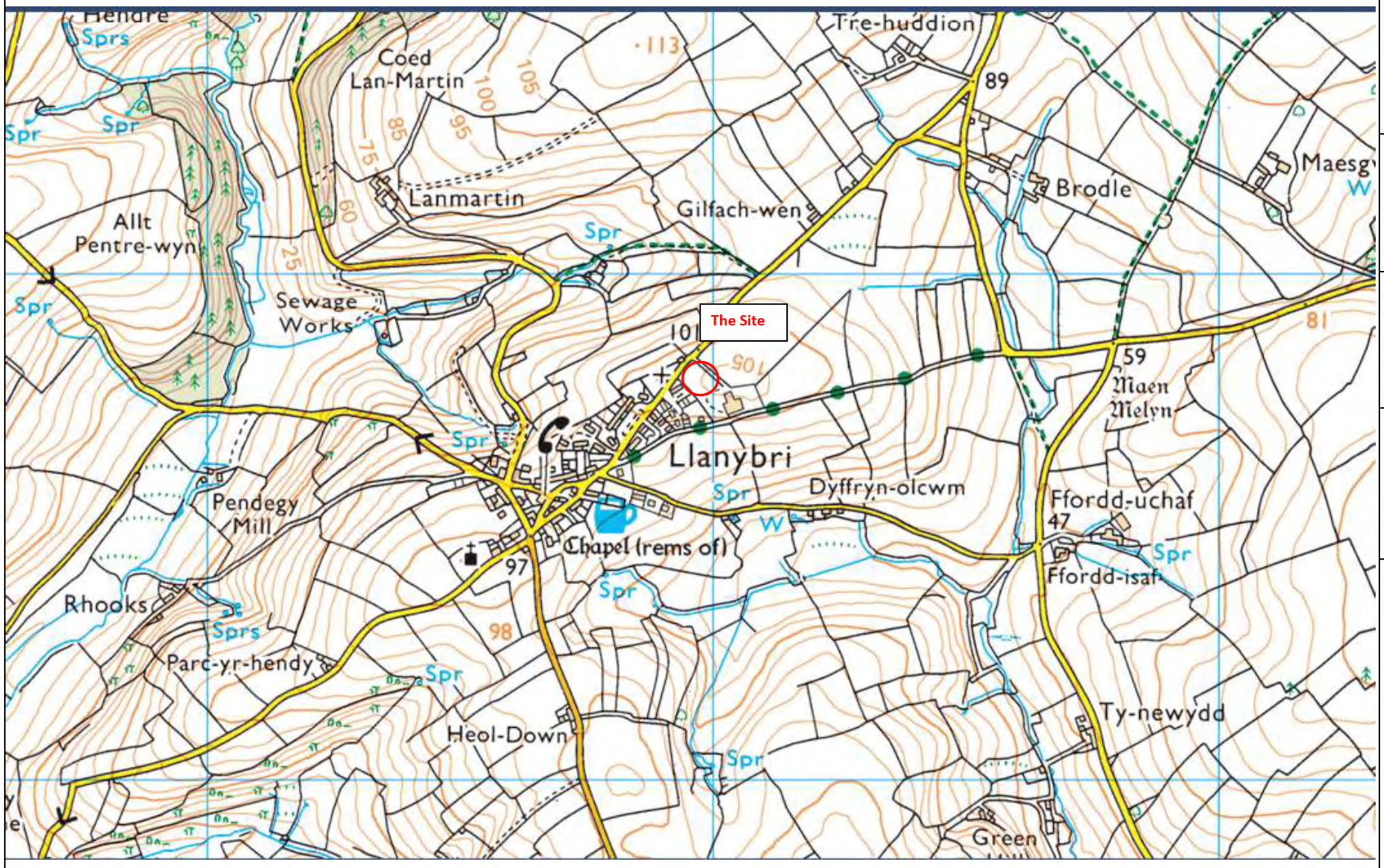
Worksheet options are identified by a green background

Drawings



terrafirma

Drawing Number
01

Drawing Title
Site Location
Llanybri

Job Number
15990

Job Title
Llanybri

NOT TO SCALE

terrafirma

Drawing Number
02

Drawing Title
SITE LAYOUT
Soakaway test locations over proposed site plan.

Job Number
15990

Job Title
Llanybri

(Locations are approximate.)

NOT TO SCALE

Appendix B

GREENFIELD RUNOFF CALCULATIONS

Print | Close Report

HR Wallingford

Greenfield runoff rate estimation for sites

www.uksuds.com | Greenfield runoff tool

Calculated by: Karl Griffiths

Site name: Maes Y Meillion

Site location: Llanybri

This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance "Rainfall runoff management for developments", SC030219 (2013) , the SuDS Manual C753 (Ciria, 2015) and the non-statutory standards for SuDS (Defra, 2015). This information on greenfield runoff rates may be the basis for setting consents for the drainage of surface water runoff from sites.

Site Details

Latitude: 51.78905° N

Longitude: 4.4086° W

Reference: 3715261820

Date: Mar 30 2023 14:33

Runoff estimation approach IH124

Site characteristics

Total site area (ha): 0.59

Methodology

Q_{BAR} estimation method: Calculate from SPR and SAAR

SPR estimation method: Calculate from SOIL type

Soil characteristics	Default	Edited
SOIL type:	2	2
HOST class:	N/A	N/A
SPR/SPRHOST:	0.3	0.3

Hydrological characteristics	Default	Edited
SAAR (mm):	1204	1204
Hydrological region:	9	9
Growth curve factor 1 year:	0.88	0.88
Growth curve factor 30 years:	1.78	1.78
Growth curve factor 100 years:	2.18	2.18
Growth curve factor 200 years:	2.46	2.46

Notes

(1) Is Q_{BAR} < 2.0 l/s/ha?

When Q_{BAR} is < 2.0 l/s/ha then limiting discharge rates are set at 2.0 l/s/ha.

(2) Are flow rates < 5.0 l/s?

Where flow rates are less than 5.0 l/s consent for discharge is usually set at 5.0 l/s if blockage from vegetation and other materials is possible. Lower consent flow rates may be set where the blockage risk is addressed by using appropriate drainage elements.

(3) Is SPR/SPRHOST ≤ 0.3?

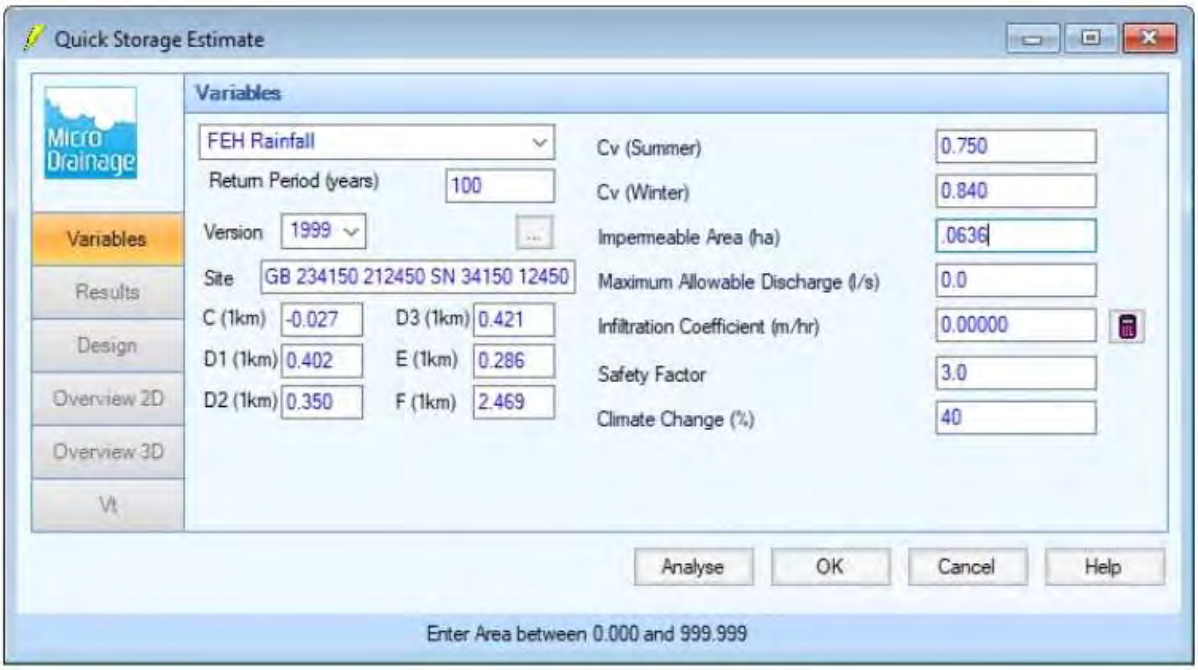
Where groundwater levels are low enough the use of soakaways to avoid discharge offsite would normally be preferred for disposal of surface water runoff.

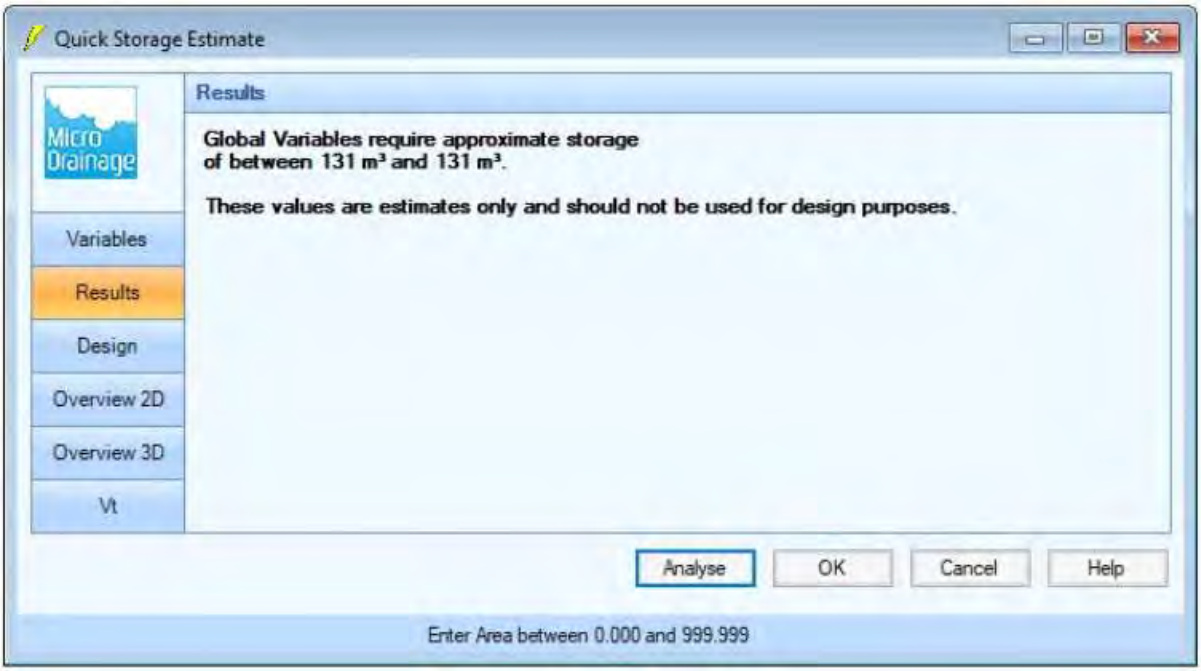
Greenfield runoff rates	Default	Edited
Q_{BAR} (l/s):	2.03	2.03
1 in 1 year (l/s):	1.78	1.78
1 in 30 years (l/s):	3.61	3.61
1 in 100 year (l/s):	4.42	4.42
1 in 200 years (l/s):	4.99	4.99

This report was produced using the greenfield runoff tool developed by HR Wallingford and available at www.uksuds.com. The use of this tool is subject to the UK SuDS terms and conditions and licence agreement , which can both be found at www.uksuds.com/terms-and-conditions.htm. The outputs from this tool are estimates of greenfield runoff rates. The use of these results is the responsibility of the users of this tool. No liability will be accepted by HR Wallingford, the Environment Agency, CEH, Hydrosolutions or any other organisation for the use of this data in the design or operational characteristics of any drainage scheme.

Appendix C

QUICK STORAGE ESTIMATE CALCULATIONS


Quick Storage Estimate
Micro Drainage
Variables
Results
Design
Overview 2D
Overview 3D
Vt
Variables
FEH Rainfall
Return Period (years) 100
Version 1999
Site GB 234150 212450 SN 34150 12450
C (1km) -0.027
D3 (1km) 0.421
D1 (1km) 0.402
E (1km) 0.286
D2 (1km) 0.350
F (1km) 2.469
Cv (Summer) 0.750
Cv (Winter) 0.840
Impermeable Area (ha) .0636
Maximum Allowable Discharge (l/s) 0.0
Infiltration Coefficient (m/hr) 0.00000
Safety Factor 3.0
Climate Change (%) 40
Analyse
OK
Cancel
Help
Enter Area between 0.000 and 999.999


Quick Storage Estimate
Micro Drainage
Variables
Results
Design
Overview 2D
Overview 3D
Vt
Results
Global Variables require approximate storage
of between 131 m³ and 131 m³.
These values are estimates only and should not be used for design purposes.
Analyse
OK
Cancel
Help
Enter Area between 0.000 and 999.999

Appendix D

STORM NETWORK HYDRAULIC CALCULATIONS

STORM SEWER DESIGN by the Modified Rational Method

Design Criteria for Storm

Pipe Sizes STANDARD Manhole Sizes STANDARD

FEH Rainfall Model

Return Period (years)	100
FEH Rainfall Version	1999
Site Location	GB 234150 212450 SN 34150 12450
C (1km)	-0.027
D1 (1km)	0.402
D2 (1km)	0.350
D3 (1km)	0.421
E (1km)	0.286
F (1km)	2.469
Maximum Rainfall (mm/hr)	50
Maximum Time of Concentration (mins)	30
Foul Sewage (l/s/ha)	0.000
Volumetric Runoff Coeff.	0.750
PIMP (%)	100
Add Flow / Climate Change (%)	0
Minimum Backdrop Height (m)	0.200
Maximum Backdrop Height (m)	1.500
Min Design Depth for Optimisation (m)	1.200
Min Vel for Auto Design only (m/s)	1.00
Min Slope for Optimisation (1:X)	500

Designed with Level Soffits

Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
1.000	50.000	2.500	20.0	0.031	5.00	0.0	0.600	o	150	Pipe/Conduit	
1.001	1.000	1.000	1.0	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
2.000	50.000	2.500	20.0	0.031	5.00	0.0	0.600	o	150	Pipe/Conduit	
2.001	1.000	1.000	1.0	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
1.000	50.00	5.37	104.000	0.031	0.0	0.0	0.0	2.26	40.0	4.2
1.001	50.00	5.37	101.500	0.031	0.0	0.0	0.0	10.16	179.6	4.2
2.000	50.00	5.37	104.000	0.031	0.0	0.0	0.0	2.26	40.0	4.2
2.001	50.00	5.37	101.500	0.031	0.0	0.0	0.0	10.16	179.6	4.2

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Free Flowing Outfall Details for Storm

Outfall Pipe Number	Outfall Name	C. Level (m)	I. Level (m)	Min I. Level (m)	D,L (mm)	W (mm)
1.001		101.500	100.500	0.000	0	0

Free Flowing Outfall Details for Storm

Outfall Pipe Number	Outfall Name	C. Level (m)	I. Level (m)	Min I. Level (m)	D,L (mm)	W (mm)
2.001		101.500	100.500	0.000	0	0

Simulation Criteria for Storm

Volumetric Runoff Coeff	0.750	Additional Flow - % of Total Flow	0.000
Areal Reduction Factor	1.000	MADD Factor * 10m³/ha Storage	2.000
Hot Start (mins)	0	Inlet Coeffiecient	0.800
Hot Start Level (mm)	0	Flow per Person per Day (l/per/day)	0.000
Manhole Headloss Coeff (Global)	0.500	Run Time (mins)	60
Foul Sewage per hectare (l/s)	0.000	Output Interval (mins)	1

Number of Input Hydrographs	0	Number of Storage Structures	2
Number of Online Controls	0	Number of Time/Area Diagrams	0
Number of Offline Controls	0	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FEH
Return Period (years)	100
FEH Rainfall Version	1999
Site Location	GB 234150 212450 SN 34150 12450
C (1km)	-0.027
D1 (1km)	0.402
D2 (1km)	0.350
D3 (1km)	0.421
E (1km)	0.286
F (1km)	2.469
Summer Storms	Yes
Winter Storms	Yes
Cv (Summer)	0.750
Cv (Winter)	0.840
Storm Duration (mins)	30

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Storage Structures for Storm

Porous Car Park Manhole: Porous Highway 1, DS/PN: 1.000

Infiltration Coefficient Base (m/hr)	0.08172	Width (m)	2.7
Membrane Percolation (mm/hr)	1000	Length (m)	50.0
Max Percolation (l/s)	37.5	Slope (1:X)	20.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	104.000	Membrane Depth (mm)	1000

Porous Car Park Manhole: Porous Highway 2, DS/PN: 2.000

Infiltration Coefficient Base (m/hr)	0.08172	Width (m)	2.7
Membrane Percolation (mm/hr)	1000	Length (m)	50.0
Max Percolation (l/s)	37.5	Slope (1:X)	20.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	104.000	Membrane Depth (mm)	1000

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1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

Simulation Criteria

Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	0.000
Hot Start (mins)	0	MADD Factor * 10m³/ha Storage	2.000
Hot Start Level (mm)	0	Inlet Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

Number of Input Hydrographs	0	Number of Storage Structures	2
Number of Online Controls	0	Number of Time/Area Diagrams	0
Number of Offline Controls	0	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FEH
FEH Rainfall Version	1999
Site Location	GB 234150 212450 SN 34150 12450
C (1km)	-0.027
D1 (1km)	0.402
D2 (1km)	0.350
D3 (1km)	0.421
E (1km)	0.286
F (1km)	2.469
Cv (Summer)	0.750
Cv (Winter)	0.840

Margin for Flood Risk Warning (mm)	0.0	DVD Status	OFF
Analysis Timestep	Fine	Inertia Status	OFF
DTS Status	ON		

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440
Return Period(s) (years)	1, 30, 100
Climate Change (%)	40, 40, 40

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.
1.000	Porous Highway 1	15 Winter	1	+40%				
1.001	Dummy 1	15 Winter	1	+40%				
2.000	Porous Highway 2	15 Winter	1	+40%				
2.001	Dumm 2	15 Winter	1	+40%				

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)	Status
1.000	Porous Highway 1	104.037	-0.113	0.000	0.13		6	5.2	OK
1.001	Dummy 1	101.529	-0.121	0.000	0.08			5.2	OK

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1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)	Status
2.000	Porous Highway 2	104.037	-0.113	0.000	0.13		6	5.2	OK
2.001	Dumm 2	101.529	-0.121	0.000	0.08			5.2	OK

PN	US/MH Name	Level Exceeded
1.000	Porous Highway 1	
1.001	Dummy 1	
2.000	Porous Highway 2	
2.001	Dumm 2	

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30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

Simulation Criteria

Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	0.000
Hot Start (mins)	0	MADD Factor * 10m³/ha Storage	2.000
Hot Start Level (mm)	0	Inlet Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

Number of Input Hydrographs	0	Number of Storage Structures	2
Number of Online Controls	0	Number of Time/Area Diagrams	0
Number of Offline Controls	0	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FEH
FEH Rainfall Version	1999
Site Location	GB 234150 212450 SN 34150 12450
C (1km)	-0.027
D1 (1km)	0.402
D2 (1km)	0.350
D3 (1km)	0.421
E (1km)	0.286
F (1km)	2.469
Cv (Summer)	0.750
Cv (Winter)	0.840

Margin for Flood Risk Warning (mm)	0.0	DVD Status	OFF
Analysis Timestep	Fine	Inertia Status	OFF
DTS Status	ON		

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440
Return Period(s) (years)	1, 30, 100
Climate Change (%)	40, 40, 40

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.
1.000	Porous Highway 1	15 Winter	30	+40%				
1.001	Dummy 1	15 Winter	30	+40%				
2.000	Porous Highway 2	15 Winter	30	+40%				
2.001	Dumm 2	15 Winter	30	+40%				

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)	Status
1.000	Porous Highway 1	104.067	-0.083	0.000	0.40		6	15.5	OK
1.001	Dummy 1	101.551	-0.099	0.000	0.25			15.4	OK

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30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)	Status
2.000	Porous Highway 2	104.067	-0.083	0.000	0.40		6	15.5	OK
2.001	Dumm 2	101.551	-0.099	0.000	0.25			15.4	OK

PN	US/MH Name	Level Exceeded
1.000	Porous Highway 1	
1.001	Dummy 1	
2.000	Porous Highway 2	
2.001	Dumm 2	

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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

Simulation Criteria

Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	0.000
Hot Start (mins)	0	MADD Factor * 10m³/ha Storage	2.000
Hot Start Level (mm)	0	Inlet Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

Number of Input Hydrographs	0	Number of Storage Structures	2
Number of Online Controls	0	Number of Time/Area Diagrams	0
Number of Offline Controls	0	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FEH
FEH Rainfall Version	1999
Site Location	GB 234150 212450 SN 34150 12450
C (1km)	-0.027
D1 (1km)	0.402
D2 (1km)	0.350
D3 (1km)	0.421
E (1km)	0.286
F (1km)	2.469
Cv (Summer)	0.750
Cv (Winter)	0.840

Margin for Flood Risk Warning (mm)	0.0	DVD Status	OFF
Analysis Timestep	Fine	Inertia Status	OFF
DTS Status	ON		

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440
Return Period(s) (years)	1, 30, 100
Climate Change (%)	40, 40, 40

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.
1.000	Porous Highway 1	15 Winter	100	+40%				
1.001	Dummy 1	15 Winter	100	+40%				
2.000	Porous Highway 2	15 Winter	100	+40%				
2.001	Dumm 2	15 Winter	100	+40%				

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)	Status
1.000	Porous Highway 1	104.084	-0.066	0.000	0.59		6	23.0	OK
1.001	Dummy 1	101.564	-0.086	0.000	0.37			23.2	OK

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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)	Status
2.000	Porous Highway 2	104.084	-0.066	0.000	0.59		6	23.0	OK
2.001	Dumm 2	101.564	-0.086	0.000	0.37			23.2	OK

PN	US/MH Name	Level Exceeded
1.000	Porous Highway 1	
1.001	Dummy 1	
2.000	Porous Highway 2	
2.001	Dumm 2	

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Appendix E

CONSULTANT DESIGN DRAWINGS

NOTES

GENERAL

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. ALL LEVELS ARE IN METRES UNLESS NOTED OTHERWISE.
3. ALL LEVELS RELATE TO ORDNANCE DATUM UNLESS NOTED OTHERWISE.
4. DO NOT SCALE FROM THIS DRAWING. USE FIGURED DIMENSIONS ONLY.
5. ANY DISCREPANCIES TO BE REPORTED IMMEDIATELY TO THE ENGINEER.
6. THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, SUBCONTRACTORS AND SPECIALISTS DRAWINGS AND SPECIFICATIONS.
7. THIS DRAWING IS COPYRIGHT © INTRADO CONSULTING ENGINEERS LTD.
8. ENGINEERING BASED ON SITE LAYOUT BY PRIME ARCHITECTURE DRAWING 736-01 Rev C ISSUED JULY 2020

LEGEND

SITE BOUNDARY

N

SITE GRID REFERENCE: SN339128 (233971mE, 212801mN)

FOUL WATER DRAINAGE SUBJECT TO S104 & S106 APPROVALS BY DCWW

ADOPTABLE HIGHWAY DESIGN SUBJECT TO CARMARTHENSHIRE COUNCIL S38 & S278 APPROVALS

SURFACE WATER DRAINAGE SUBJECT TO CARMARTHENSHIRE COUNCIL SAB APPROVAL

ANY WORKS CARRIED OUT PRIOR TO THE ISSUE OF RELEVANT APPROVALS ARE ENTIRELY AT THE DEVELOPER'S RISK

1:2500 | 25m | 50m | 75m | 100m | 125m | 150m | 175m | 200m | 225m | 250m

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REV	DESCRIPTION	BY	DATE

intrado
Consulting Engineers
UNIT C
Upper Boat Business Centre
Pontypridd CF37 5BP
tel: 02920 811097
web: www.intrado.co.uk
e-mail: admin@intrado.co.uk

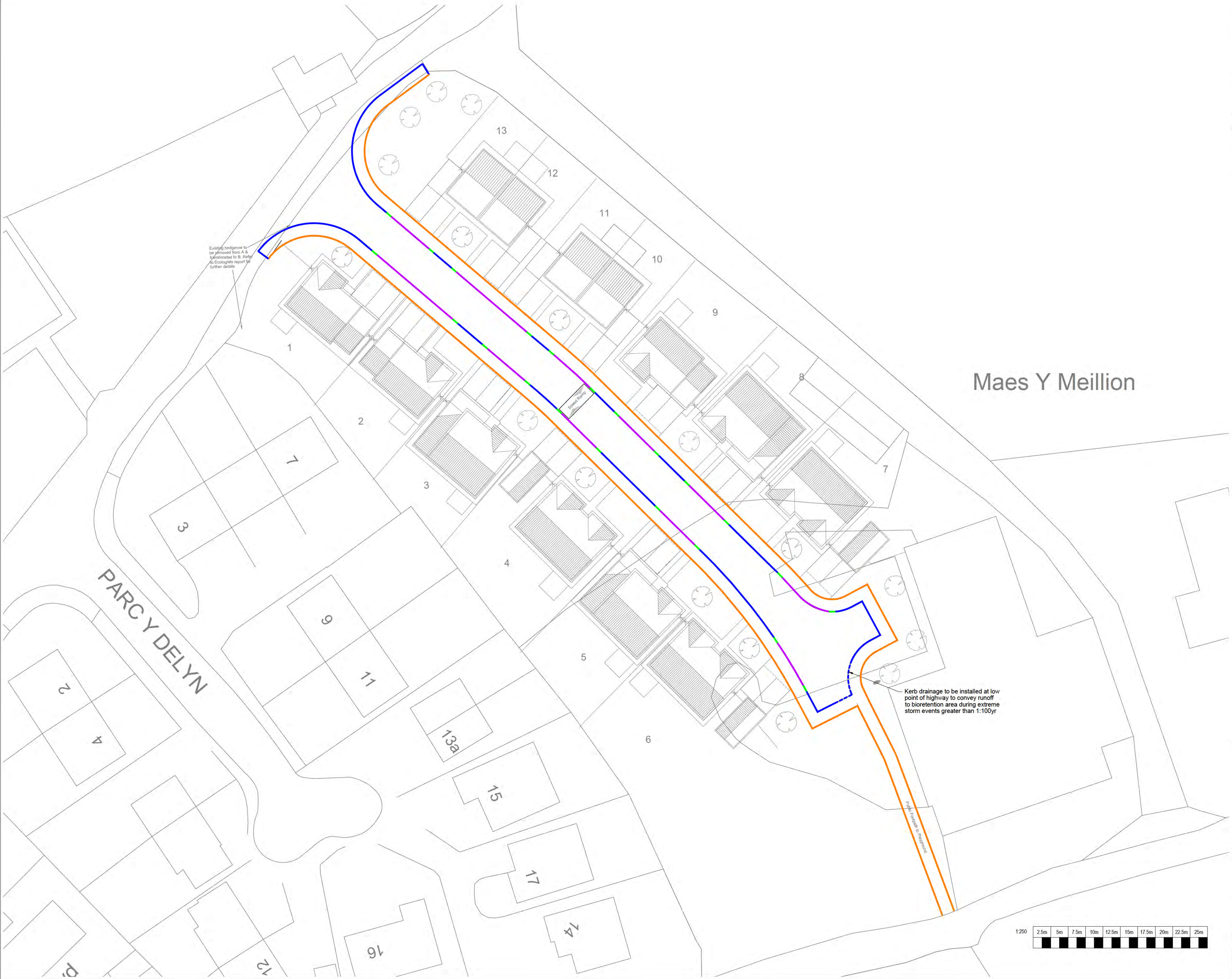
client: Mr. & Mrs. DAVIES

project: MAES Y MEILLION LANYBRI

drawing title: SITE LOCATION PLAN

drawn	chkd	scale	date
KMG	CC	1:2500 @ A1	JAN 2023

Preliminary ☒ Tender ☐ Construction ☐	Job No.	Drawing No.	Rev.
	INT22182	001	0



NOTES

GENERAL
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. ALL LEVELS ARE IN METRES UNLESS NOTED OTHERWISE.
3. ALL LEVELS RELATE TO ORDNANCE DATUM UNLESS NOTED OTHERWISE.
4. DO NOT SCALE FROM THIS DRAWING. USE FIGURED DIMENSIONS ONLY.
5. ANY DISCREPANCIES TO BE REPORTED IMMEDIATELY TO THE ENGINEER.
6. THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, SUBCONTRACTORS AND SPECIALISTS DRAWINGS AND SPECIFICATIONS.
7. THIS DRAWING IS COPYRIGHT © INTRADO CONSULTING ENGINEERS LTD.
8. ENGINEERING BASED ON SITE LAYOUT BY PRIME ARCHITECTURE DRAWING 736-01 Rev C ISSUED JULY 2020

LEGEND

- HB2 KERBING (125mm UPSTAND)
- BULLNNOSE KERBING
  - BN3 0-6mm AT PEDESTRIAN CROSSINGS
  - BN2 25mm AT VEHICULAR CROSSINGS
- ASSOCIATED TRANSITION KERBING
- TYPE EF EDGING KERB (FLUSH)

SITE GRID REFERENCE: SN339128
(233971mE, 212801mN)

FOUL WATER DRAINAGE SUBJECT TO S104 & S106 APPROVALS BY DCWW

ADOPTABLE HIGHWAY DESIGN SUBJECT TO CARMARTHENSHIRE COUNCIL S38 & S278 APPROVALS

SURFACE WATER DRAINAGE SUBJECT TO CARMARTHENSHIRE COUNCIL SAB APPROVAL

ANY WORKS CARRIED OUT PRIOR TO THE ISSUE OF RELEVANT APPROVALS ARE ENTIRELY AT THE DEVELOPER'S RISK

REV.	DESCRIPTION	BY	DATE

intrado Consulting Engineers

UNIT C
Upper Boat Business Centre
Pontypridd CF37 5BP
tel: 02920 811097
web: www.intrado.co.uk
e-mail: admin@intrado.co.uk

client: Mr. & Mrs. DAVIES

project: MAES Y MEILLION LANYBRI

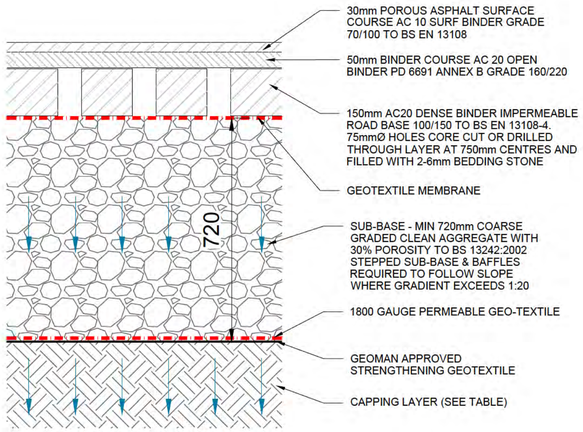
drawing title: ENGINEERING LAYOUT

drawn	chkd	scale	date
KMG	CC	1:250 @ A1	JAN 2023

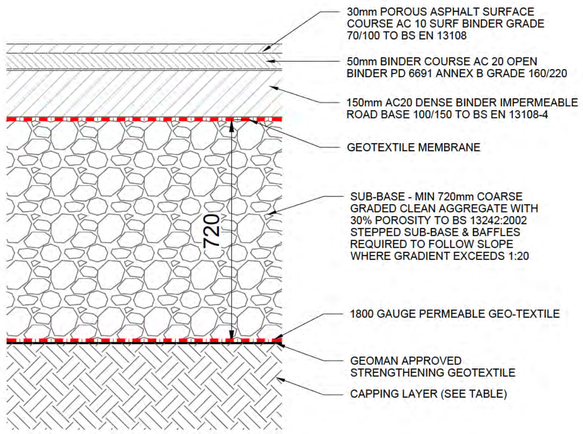
Status	Job No.	Drawing No.	Rev.
Preliminary ☒ Tender ☐ Construction ☐	INT22182	004	0

CBR VALUE	MOT TYPE 1	CAPPING MATERIAL
>5%	-	-
4%	100mm	150mm
3%	125mm	225mm
2%	175mm	350mm
<1%	300mm	600mm

SIEVE SIZE	% PASSING
100mm	100
75mm	80-100
60mm	60-80
37.5mm	30-60
20mm	0-20
10mm	0-5



ADOPTED PERMEABLE ASPHALT HIGHWAY CONSTRUCTION (SUBJECT TO OCCASIONAL COMMERCIAL VEHICLE LOADING)
N.T.S.



ADOPTED IMPERMEABLE ASPHALT HIGHWAY CONSTRUCTION DETAIL (SUBJECT TO OCCASIONAL COMMERCIAL VEHICLE LOADING)
N.T.S.

NOTES

GENERAL
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
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3. ALL LEVELS RELATE TO ORDNANCE DATUM UNLESS NOTED OTHERWISE.
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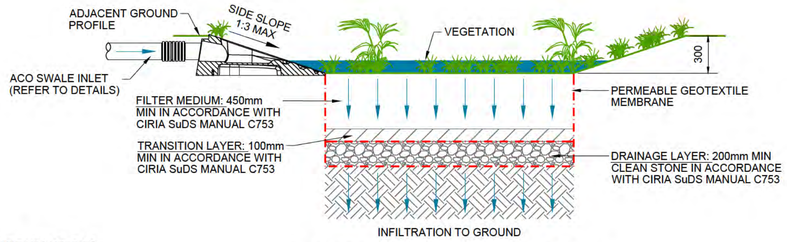
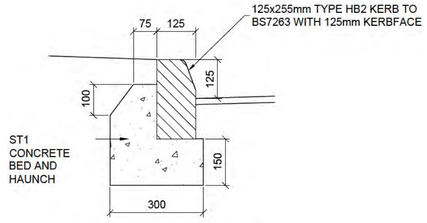


TYPICAL INFILTRATION BASIN CONSTRUCTION DETAIL
N.T.S.



HB2 KERB DETAIL
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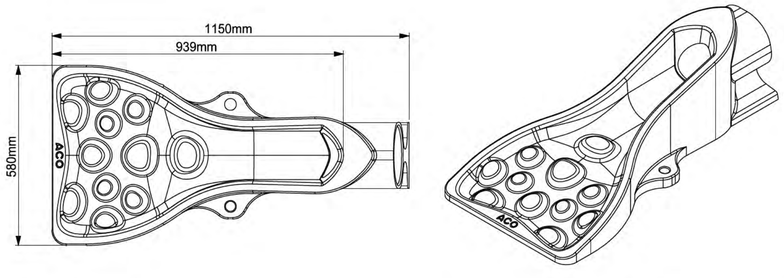

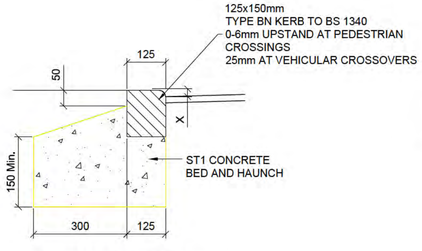

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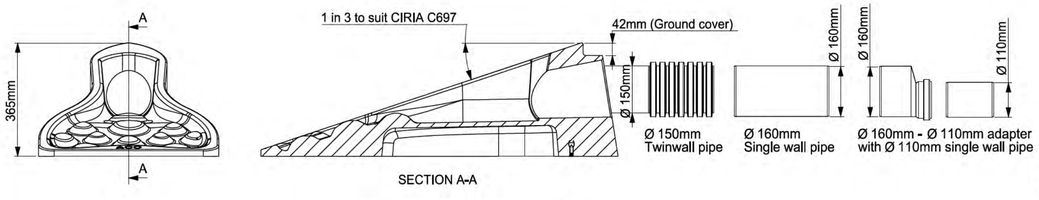
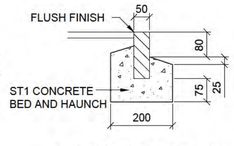


ACO SWALE OUTLET DETAIL
N.T.S



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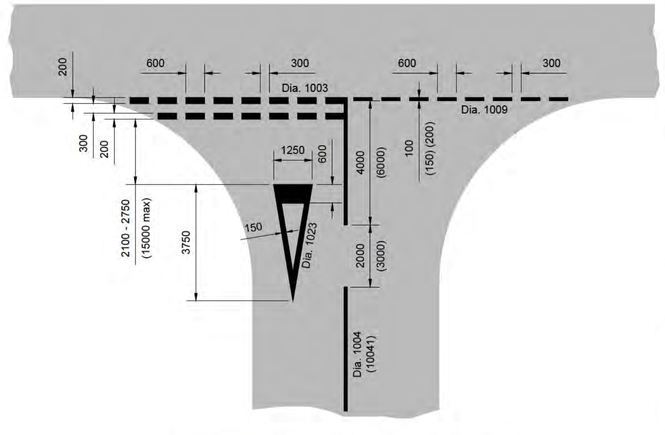

TYPICAL JUNCTION LINING DETAIL
NTS

SITE GRID REFERENCE: SN339128 (233971mE, 212801mN)

FOUL WATER DRAINAGE SUBJECT TO S104 & S106 APPROVALS BY DCWW

ADOPTABLE HIGHWAY DESIGN SUBJECT TO CARMARTHENSHIRE COUNCIL S38 & S278 APPROVALS

SURFACE WATER DRAINAGE SUBJECT TO CARMARTHENSHIRE COUNCIL SAB APPROVAL

ANY WORKS CARRIED OUT PRIOR TO THE ISSUE OF RELEVANT APPROVALS ARE ENTIRELY AT THE DEVELOPER'S RISK

REV.	DESCRIPTION	BY	DATE
P1	DETAILS REVISED FOLLOWING LOCAL AUTHORITY COMMENTS	KMG	22.03.2023

intrado Consulting Engineers
Unit C, Upper Boat Business Centre, Pontypridd CF37 5BP
tel: 02920 811097
web: www.intrado.co.uk
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client: Mr. & Mrs. DAVIES

project: MAES Y MEILLION LANYBRI

drawing title: PROPOSED HIGHWAY & SuDS CONSTRUCTION DETAILS

drawn	chkd	scale	date
KMG	CC	AS SHOWN	JAN 2023

Preliminary ☒ Tender ☐ Construction ☐	Job No.	Drawing No.	Rev.
	INT22182	005	P1

NOTES

GENERAL

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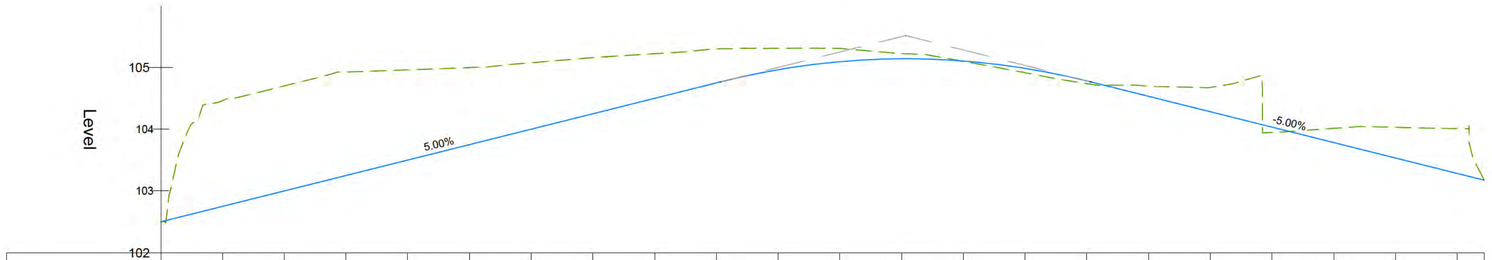
LEGEND

EXISTING GROUND PROFILE

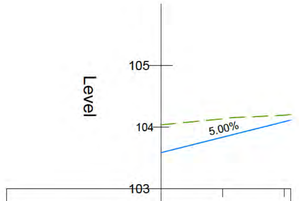
PROPOSED HIGHWAY PROFILE

ROAD 1 LONGSECTION
SCALE: H 1:250,V 1:50. DATUM: 102.000



Chainage	00.000	05.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	55.000	60.000	65.000	70.000	75.000	80.000	85.000	90.000	95.000	100.000	105.000	107.188
Existing Levels	102.501	104.463	104.702	104.928	104.961	104.998	105.077	105.160	105.223	105.304	105.310	105.309	105.223	105.100	104.915	104.739	104.698	104.678	103.947	104.015	104.032	104.010	103.174
Proposed Levels	102.501	102.751	103.001	103.251	103.501	103.751	104.001	104.251	104.501	104.751	104.965	105.095	105.142	105.106	104.986	104.783	104.534	104.284	104.034	103.784	103.534	103.284	103.174
Horizontal Geometry		L =44.666								R: 57.750 L: 4.265		L =29.513							R: 82.750 L: 24.584			L =4.159	
Vertical Geometry		G = 1:20 L = 45.327m										R = 300.000 K = 3.000 L = 30.000							G = -1:20 L = 31.861m				

TURNING HEAD LONGSECTION
SCALE: H 1:250,V 1:50. DATUM: 103.000



Chainage	00.000	05.000	10.000	10.516
Existing Levels	104.037	104.137	104.194	104.208
Proposed Levels	103.588	103.838	104.088	104.114
Horizontal Geometry		L =10.516		
Vertical Geometry		G = 1:20 L = 10.516m		

SITE GRID REFERENCE: SN339128 (233971mE, 212801mN)

FOUL WATER DRAINAGE SUBJECT TO S104 & S106 APPROVALS BY DCWW

ADOPTABLE HIGHWAY DESIGN SUBJECT TO CARMARTHENSHIRE COUNCIL S38 & S278 APPROVALS

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REV.	DESCRIPTION	BY	DATE

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Pontypridd CF37 5BP

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web: www.intrado.co.uk
e-mail: admin@intrado.co.uk

client
Mr. & Mrs. DAVIES

project
MAES Y MEILLION LANYBRI

drawing title
PROPOSED HIGHWAY LONGSECTIONS

drawn	chkd	scale	date
KMG	CC	AS SHOWN	JAN 2023

Preliminary	Tender	Construction	Job No.	Drawing No.	Rev.
☒	☐	☐	INT22182	006	0

Maes Y Meillion

New double surface water gulley to be constructed at site entrance to prevent surface water accessing existing road. Gulleies to drain to highway subbase via diffuser units and discharge to ground through infiltration

New residential development highway levels to tie into existing. Refer to INT22182-006 for longitudinal sections

Junction works subject to Section 278 agreement with Carmarthenshire County Council

Existing hedgerow to be removed from A & B relocated to B. Refer to Ecologists report for further details

5.50m minimum full width of highway. Refer to INT22182-005 for SuDS construction details

Speed ramp to be constructed

Road base layer 2.75m minimum width (half of highway) to be cored to allow infiltration of surface water to groundwater network below Refer to INT22182-005 for SuDS construction details

Road base layer for 2.75m minimum width (half of highway) not to be cored. Highway to be laid in crossfall to ensure surface water runoff is conveyed to permeable section for infiltration to groundwater network below. Refer to INT22182-005 for details.

5.50m minimum full width of highway. Refer to INT22182-005 for SuDS construction details

5.50m minimum width turning head. Refer to INT22182-005 for SuDS construction details. Road base layer to be cored to allow infiltration of surface water to groundwater network below

Kerb drainage to be installed at low point in highway to drain surface water runoff to infiltration basin during storm events in excess of 1:100yr to avoid highway flooding

ACO swale inlet (or similar approved product) to be installed in infiltration basin

PARC Y DELYN

NOTES

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LEGEND

- EXTERNAL SPOT LEVEL
- SURFACE WATER DRAINAGE (S38 ADOPTABLE)
- SURFACE WATER HIGHWAY GULLEY
- SURFACE WATER DIFFUSER UNIT
- PERMEABLE HIGHWAY (S38 ADOPTABLE)
- IMPERMEABLE HIGHWAY (S38 ADOPTABLE)
- SWALE/ BIORETENTION AREA (S38 ADOPTABLE)
- HIGHWAY CONTOURS (100mm INCREMENTS ILLUSTRATED) (500mm INCREMENTS LABELED)
- SITE BOUNDARY

N

SITE GRID REFERENCE: SN339128 (233971mE, 212801mN)

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REV.	DESCRIPTION	BY	DATE
P1	DESIGN REVISED FOLLOWING LOCAL AUTHORITY COMMENTS	KMG	22.03.2023

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web: www.intrado.co.uk
e-mail: admin@intrado.co.uk

client: Mr. & Mrs. DAVIES

project: MAES Y MEILLION LANYBRI

drawing title: ENGINEERING LAYOUT

drawn	chkd	scale	date
KMG	CC	1:250 @ A1	JAN 2023

Preliminary ☒ Tender ☐ Construction ☐

Job No.	Drawing No.	Rev.
INT22182	007	P1

1:250 2.5m 5m 7.5m 10m 12.5m 15m 17.5m 20m 22.5m 25m

Appendix F

LANDSCAPING SPECIFICATIONS

Rain Garden Soil/Planting Mixture

Improved Soil/Enhanced Plating Medium

The Rain Garden should be filled with an Improved Soil/Enhanced Plating Medium
The improved soil layer/Enhanced Planting Medium should be free draining and reasonably resistant to compaction and capable of supporting plant life.
The Rain Garden planting medium should have a Saturated Hydraulic Conductivity in excess of 100mm/hr
The Improved Soil/ Enhanced planting medium in the Rain Garden design provides a surface water treatment function within the Rain Garden
A typical Rain Garden improved soil/Enhanced Planting Medium planting medium typically consists of 50% coarse sand, 10% locally sourced topsoil and 40% compost.
Various other types of mixtures are available, advice should be sought from the scheme landscape Gardener or a Horticulturist as to the best soil mix for the chosen planting scheme
The improved soil layer/enhanced planting medium should be laid in 150mm depths and lightly compacted. The excavation should not be flooded or saturated when the soil mix is placed or compacted
A surface mulch layer consisting of washed pebbles, or a non-floating organic mulch such as wood mulch or coir matting can be laid over the soil layer to help retain moisture is so desired.

Rain Garden Planting

It is recommended that a Rain Garden should be planted with a wide range of plant species in order to create a densely vegetated, stable and thriving bed with dense and thick root systems which will thrive without regular maintenance.
A typical Rain Garden is planted with about 10 species planted in 2 to 3 clumps per square metre.
By planting several species, you will be planting a Rain Garden that can still succeed even if one or two species do not survive.
A typical planting density is 6 to 10 plants per square metre, but you may wish to vary this based on the plants chosen and the Rain Garden location.
Like any garden there is a choice of planting styles, your Rain Garden may be planted in an English Country Garden, American Prairie or Ornamental Style. You could even use it to grow vegetables, the choice is yours.
Keep a record of the plants bought for your Rain Garden, this will need to be made available if required by the SAB during their inspection program

Rain Garden Maintenance

A well-constructed Rain Garden should require no more maintenance than any flower bed within a garden.
New Rain Gardens will need to be watered for the first one or two years until the garden is established.
Weeding will be necessary the garden is established and the mature plants out compete the weeds
Plants should be pruned and cut back as per the species requirements.
Any dead plants should be removed and replaced as required, as the garden matures it will become clear what type of plants grow best in your garden
The surface of the Rain Garden should regularly be “loosened” to ensure the infiltration capacity is not reduced.
Rain Garden maintenance can be carried out alongside everyday gardening activities.

Rain Garden Amenity

Amenity*

*Any feature that provides comfort, convenience, or pleasure:

*An amenity is something considered to benefit a property

Rain Garden Amenity Benefits

A Rain Garden Is a desirable or useful feature or facility of a building or place.

They enhance/improve the pleasantness or attractiveness of a place

They improve liveability of the dwelling

They make life easier or more pleasant

They contribute to the climate resilience of the development

They enhances the liveability of the dwelling and improves the quality of life of the occupants and visitors

They make the dwelling a pleasant place to live and work

They help reduce the hazards associated with climate change

Rain Garden Biodiversity

Biodiversity*

*Biodiversity encompasses the number, abundance and distribution of all species of life on earth. It includes the diversity of individual species, the generic diversity within individual species and the range of habitats that support them.

Biodiversity also includes humans and our interactions with the environment.

Local Biodiversity reflects the character of the plants and wildlife that share the space in which we humans live, work and play.

Rain Garden Biodiversity Benefits;

Help Support local habitat and species

Contribute to local habitat connectivity

Provide a rich source of nectar and food for bees and birds.

Provide shade and shelter for small creatures and insects

Be a diverse self-sustaining and resilient ecosystem

Provide a place for recreation and education for the dwelling occupants

Further Information

The design and form of your Rain Garden can be as simple or complex as you desire.

It can include such things as, Water feature, animal habitat, Bee hotels, Bird boxes, Shelter stones, the choice is yours.

A "Planting Suggestions" list from the Rain Garden Guide is attached as a guide.

There is lots of information available on the internet regarding the design and construction of rain gardens, some sites are listed below for reference.

Sustainable Drainage Systems:	www.ciria.com/suds
The SuDS Manual (Ciria 753)	www.ciria.com/suds
The Rain Garden Guide:	www.raingardens.info
Royal Horticultural Society:	www.rhs.org.uk
Royal Society Protection of Birds	www.rspb.org
The Wildlife Trust	www.wildlifetrusts.org
Bug life	www.buglife.co.uk
Butterfly Conservation	www.butterfly-conservation.org

Specification

Improved Soil Planting Medium

The improved soil layer should be free draining and reasonably resistant to compaction and capable of supporting plant life.

A typical Rain Garden planting mix typically consists of 50% coarse sand, 10% locally sourced topsoil and 40% compost.

The Rain Garden planting medium should have a Saturated Hydraulic Conductivity in excess of 100mm/hr

The improved soil layer should be laid in 150mm depths and lightly compacted. The excavation should not be flooded or saturated when the soil mix is placed or compacted

The Improved Soil/ Enhanced planting medium in the Rain Garden design provides a surface water treatment function within the Rain Garden

A surface mulch layer consisting of washed pebbles, or a non floating organic mulch such as wood mulch, or coir matting can be laid over the soil layer to help retain moisture is so desired.

Impermeable Geotextile

The Sides of the Rain Garden should be lined with an impermeable Geotextile membrane

Geotextile Information attached

Permeable Geotextile

A Permeable Geotextile should be placed at the interface between the planting medium and the soakaway.

Geotextile Information attached

Planting Suggestions

Common name	Scientific name	Habit	Sunlight and Aspect	Origin
Guelder rose	*Viburnum opulus*	Perennial shrub	Any	Native. Flowers attract insects and berries are eaten by birds.
Dogwood	*Cornus sanguinea*	Perennial shrub	Any	Native. Leaves are larval food for vase bearer moth and berries eaten by birds. Often planted for attractive winter stems.
Culvers root	*Veronicastrum virginicum*	Herbaceous perennial	Full sun or partial shade	Non-native. Tall with long terminal blue flower spikes. On the RHS 'plants for pollinators' list.
Aster	*Aster spp.*	Herbaceous perennial	Full sun or partial shade	Non-native. Often late flowering. Clump forming. Several species on the RHS 'plants for pollinators' list.
Black eyed susan	*Rudbeckia birta*	Herbaceous annual or biennial	Full sun or partial shade	Non-native. Spectacular yellow and black flowers. On RHS 'plants for pollinators' list.
Stinking hellebore	*Helleborus foetidus*	Herbaceous perennial	Full sun or partial shade	Native. Winter flowers.
[redacted]		Deciduous perennial		
Bugle	*Ajuga reptans*	Rhizomatous perennial	Partial shade	Native. Low growing and will form a mat.
Columbine	*Aquilegia spp.*	Herbaceous perennial	Full sun or partial shade	Non-native. Clump forming with tall flower spikes. On RHS 'plants for pollinators' list.
Inula	*Inula hookeri*	Herbaceous perennial	Partial shade	Tall clump forming with yellow flowers. On RHS 'plants for pollinators' list.
Hemp agrimony	*Eupatorium cannabinum*	Herbaceous perennial	Full sun or partial shade	Native. Sub-shrubs with pink flowers.
Bellflower	*Campanula glomerata*	Herbaceous perennial	Full sun or partial shade	Native. Clumps bearing violet-blue bell shaped flowers.
Sneezeweed	*Helenium sp.*	Herbaceous perennial	Full sun	Non-native. Clump forming with red flowers. On RHS 'plants for pollinators' list.
Lesser periwinkle	*Vinca minor*	Perennial sub-shrub	Any	Non-native. Ground cover with blue flowers.
Elephants ear	*Bergenia sp.*	Rhizomatous perennial	Full sun or partial shade	Non-native. Large leaves and pink flowers.
Plantain lilies	*Hosta spp.*	Herbaceous perennial	Part shade	Non-native. Attractive light coloured flowers.
Yellow flag	*Iris pseudocorus*	Rhizomatous perennial	Full sun or partial shade	Native. Likely to prefer wetter areas near inlet.
Siberian flag	*Iris sibirica*	Rhizomatous perennial	Full sun or partial shade	Non-native. Blue flowers. Prefers moist but well drained soil.
Garlic and onions	*Allium spp.*	Bulbous perennials	Full sun	Non-native. On RHS 'plants for pollinators' list.
Soft rush	*Juncus effusus*	Evergreen perennial	Full sun or partial shade	Native. Form tussocks – likely to prefer wetter areas.
Pendulous sedge	*Carex pendula*	Rhizomatous perennial	Full sun or partial shade	Native. Nodding flower spikes. Likely to prefer wetter areas near inlet.
Zebra grass	*Miscanthis sinensis*	Perennial, deciduous grass	Full sun	Non-native. Tussock forming ornamental grass with silky flowers.
Switch grass	*Panicum virgatum*	Deciduous perennial grass	Full sun	Non-native. Tussock forming ornamental grass.
Royal fern	*Osmunda regalis*	Deciduous fern	Any	Native. Large clump-forming plants.
Male fern	*Dryopteris felix-mas*	Deciduous or evergreen fern	Partial shade or full shade	Native. Large shuttlecock-like form.
Broad buckler fern	*Dryopteris dilatata*	Deciduous or evergreen fern	Partial shade or full shade	Native. Large shuttlecock-like form.

Area 1 Plants

Tall Plants

Sweet pea

Scientific classification

Kingdom:	Plantae
(unranked):	Angiosperms
(unranked):	Eudicots
(unranked):	Rosids
Order:	Fabales
Family:	Fabaceae
Subfamily:	Faboideae
Tribe:	Vicieae
Genus:	*Lathyrus*
Species:	***L. odoratus***

Binomial name

Lathyrus odoratus
L.

Clematis

Clematis 'Nelly Moser'

Scientific classification

Kingdom:	Plantae
Clade:	Angiosperms
Clade:	Eudicots
Order:	Ranunculales
Family:	Ranunculaceae
Subfamily:	Ranunculoideae
Tribe:	Anemoneae
Genus:	***Clematis*** L.[1]

Species

See text

Synonyms

Atragene L.
Coriflora Weber
Viorna Rchb.[1]

Area 2

Medium Height

1. Rudbeckia
2. Persicaria
3. Eupatorium
4. Monarda
5. Aster
6. Hosta
7. Iris
8. Miscanthus
9. Carex
10. Cornus

Hosta

Aster

Area 3 Plants

Low to Medium Height/Ground Cover

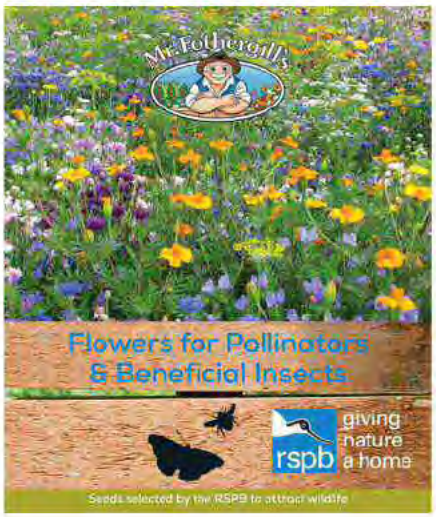
A 100% WILDFLOWER mixture of species that are frequently found on low lying areas subject to winter flooding. Sow at 1 grams per square metre or 4 Kgs per acre.

Mixture specification
(all percentages by seed weight)
100% Wild flower

* Species marked with an asterisk are included on the RHS list of Perfect for Pollinators

Perfect for pollinators

*BETONY Stachys officinalis 7.5 % of mix
*BLACK KNAPWEED Centaurea nigra 3 % of mix
COMMON SORREL Rumex acetosa 3 % of mix
*COWSLIP Primula veris 2.5 % of mix
*DEVILS BIT SCABIOUS Succisa pratensis 5 % of mix
*GREAT BURNET Sanguisorba officinalis 2 % of mix
*HEDGE BEDSTRAW Galium mollugo 8 % of mix
*MEADOW BUTTERCUP Ranunculus acris 12.5 % of mix
*MEADOW VETCHLING Lathyrus pratensis 11 % of mix
*MEADOW-SWEET Filipendula ulmaria 5 % of mix
*OXEYE DAISY Leucanthemum vulgare 5 % of mix
PEPPER SAXIFRAGE Silaum silaus 5 % of mix
*RAGGED ROBIN Lychnis flos-cuculi 5 % of mix
RIBWORT PLANTAIN Plantago lanceolata 2.5 % of mix
*SELF HEAL Prunella vulgaris 5.5 % of mix
*TUFTED VETCH Vicia cracca 5 % of mix
*YARROW Achilla millefolium 2.5 % of mix
*YELLOW RATTLE Rhinanthus minor 10 % of mix

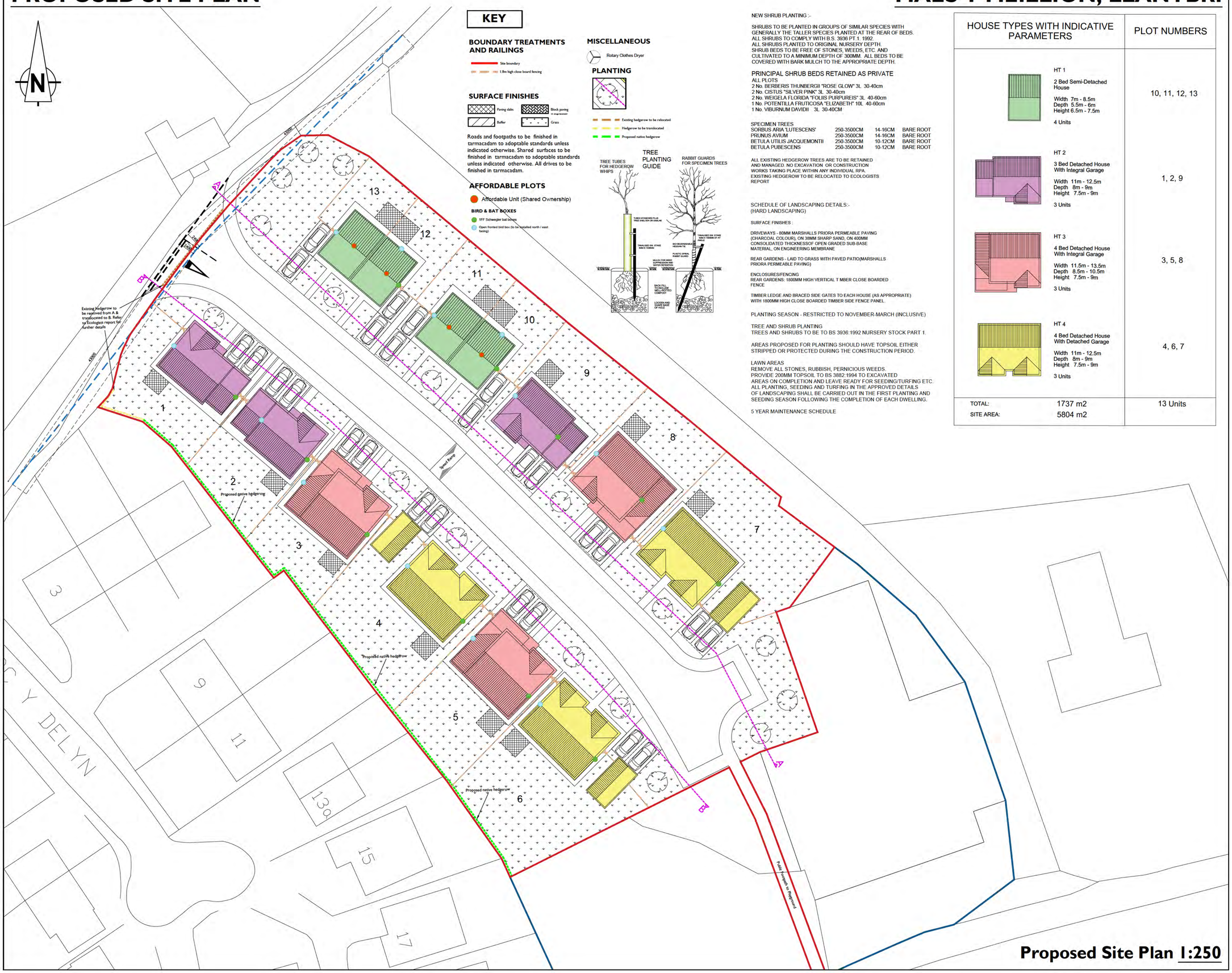


Appendix G

ARCHITECTURAL INFORMATION

PROPOSED SITE PLAN

MAES Y MEILLION, LLANYBRI



KEY

BOUNDARY TREATMENTS AND RAILINGS

Site boundary

1.8m high close board fencing

SURFACE FINISHES

Paving slabs

Block paving

Buffer

Grass

Roads and footpaths to be finished in tarmacadam to adoptable standards unless indicated otherwise. Shared surfaces to be finished in tarmacadam to adoptable standards unless indicated otherwise. All drives to be finished in tarmacadam.

AFFORDABLE PLOTS

Affordable Unit (Shared Ownership)

BIRD & BAT BOXES

1FF Schwegler bat bricks

Open fronted bird box (to be installed north / east facing)

MISCELLANEOUS

Rotary Clothes Dryer

PLANTING

Existing hedgerow to be relocated

Hedgerow to be translocated

Proposed native hedgerow

TREE PLANTING GUIDE

NEW SHRUB PLANTING :-

SHRUBS TO BE PLANTED IN GROUPS OF SIMILAR SPECIES WITH GENERALLY THE TALLER SPECIES PLANTED AT THE REAR OF BEDS.
ALL SHRUBS TO COMPLY WITH B.S. 3936 PT.1. 1992.
ALL SHRUBS PLANTED TO ORIGINAL NURSERY DEPTH.
SHRUB BEDS TO BE FREE OF STONES, WEEDS, ETC. AND CULTIVATED TO A MINIMUM DEPTH OF 300MM. ALL BEDS TO BE COVERED WITH BARK MULCH TO THE APPROPRIATE DEPTH.

PRINCIPAL SHRUB BEDS RETAINED AS PRIVATE
ALL PLOTS
2 No. BERBERIS THUNBERGII "ROSE GLOW" 3L 30-40cm
2 No. CISTUS "SILVER PINK" 3L 30-40cm
2 No. WEIGELA FLORIDA "FOLIIS PURPUREIS" 3L 40-60cm
1 No. POTENTILLA FRUTICOSA "ELIZABETH" 10L 40-60cm
1 No. VIBURNUM DAVIDII 3L 30-40CM

SPECIMEN TREES

SORBUS ARIA 'LUTESCENS'	250-3500CM	14-16CM	BARE ROOT
PRUNUS AVIUM	250-3500CM	14-16CM	BARE ROOT
BETULA UTILIS JACQUEMONTII	250-3500CM	10-12CM	BARE ROOT
BETULA PUBESCENS	250-3500CM	10-12CM	BARE ROOT

ALL EXISTING HEDGEROW TREES ARE TO BE RETAINED AND MANAGED. NO EXCAVATION OR CONSTRUCTION WORKS TAKING PLACE WITHIN ANY INDIVIDUAL RPA. EXISTING HEDGEROW TO BE RELOCATED TO ECOLOGISTS REPORT

SCHEDULE OF LANDSCAPING DETAILS:-
(HARD LANDSCAPING)

SURFACE FINISHES :

DRIVEWAYS - 80MM MARSHALLS PRIORA PERMEABLE PAVING (CHARCOAL COLOUR), ON 38MM SHARP SAND, ON 400MM CONSOLIDATED THICKNESSOF OPEN GRADED SUB-BASE MATERIAL, ON ENGINEERING MEMBRANE.

REAR GARDENS - LAID TO GRASS WITH PAVED PATIO(MARSHALLS PRIORA PERMEABLE PAVING)

ENCLOSURES/FENCING
REAR GARDENS: 1800MM HIGH VERTICAL T MBER CLOSE BOARDED FENCE

TIMBER LEDGE AND BRACED SIDE GATES TO EACH HOUSE (AS APPROPRIATE) WITH 1800MM HIGH CLOSE BOARDED TIMBER SIDE FENCE PANEL.

PLANTING SEASON - RESTRICTED TO NOVEMBER-MARCH (INCLUSIVE)

TREE AND SHRUB PLANTING
TREES AND SHRUBS TO BE TO BS 3936:1992 NURSERY STOCK PART 1.

AREAS PROPOSED FOR PLANTING SHOULD HAVE TOPSOIL EITHER STRIPPED OR PROTECTED DURING THE CONSTRUCTION PERIOD.

LAWN AREAS
REMOVE ALL STONES, RUBBISH, PERNICIOUS WEEDS.
PROVIDE 200MM TOPSOIL TO BS 3882:1994 TO EXCAVATED AREAS ON COMPLETION AND LEAVE READY FOR SEEDING/TURFING ETC.
ALL PLANTING, SEEDING AND TURFING IN THE APPROVED DETAILS OF LANDSCAPING SHALL BE CARRIED OUT IN THE FIRST PLANTING AND SEEDING SEASON FOLLOWING THE COMPLETION OF EACH DWELLING.

5 YEAR MAINTENANCE SCHEDULE

HOUSE TYPES WITH INDICATIVE PARAMETERS		PLOT NUMBERS
	HT 1 2 Bed Semi-Detached House Width 7m - 8.5m Depth 5.5m - 6m Height 6.5m - 7.5m 4 Units	10, 11, 12, 13
	HT 2 3 Bed Detached House With Integral Garage Width 11m - 12.5m Depth 8m - 9m Height 7.5m - 9m 3 Units	1, 2, 9
	HT 3 4 Bed Detached House With Integral Garage Width 11.5m - 13.5m Depth 8.5m - 10.5m Height 7.5m - 9m 3 Units	3, 5, 8
	HT 4 4 Bed Detached House With Detached Garage Width 11m - 12.5m Depth 8m - 9m Height 7.5m - 9m 3 Units	4, 6, 7
TOTAL:	1737 m2	13 Units
SITE AREA:	5804 m2	

Proposed Site Plan 1:250

Notes

This drawing is copyrighted and must not be reproduced or disclosed to third parties without the prior written permission of Prime Architecture Limited.

Do not scale from this drawing. Responsibility will not be accepted by Prime Architecture Limited for errors made by others scaling from the drawing. Use written dimensions only. Contractor to verify all dimensions before commencing work on site.

Prime Architecture Limited are to be notified immediately in writing of any discrepancies. All survey information incorporated within the drawings cannot be guaranteed as accurate unless confirmed by a fixed dimension.

All dimensions are in millimeters unless otherwise noted.

This drawing is to be read in conjunction with all relevant project drawings and specification prepared by Prime Architecture Limited and other relevant consultants, specialists, etc.

CDM noted are provided to assist the contractor in managing residual hazards identified during the design stage. Any such notes do not relieve the contractor of their duties and they must provide a safe system of work based on method statements, risk assessments, etc.

Revision:	Description:	Date:
A	OS Map updated to include recent development.	14/04/21
B	Public footpath link to playground added.	30/04/21
C	Bird and bat boxes	20/10/21

Drawing Status:

PLANNING

PRIME ARCHITECTURE

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www.prime-arch.co.uk

CIAT Registered Practice

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Client:

Mr. & Mrs. Davies

Project Title:

Outline Planning for 13 Dwellings at Maes Y Meillion, Llanybri

Drawing Title:

Proposed Site Plan

Scale:	Date:
1:250 @ A1	July 2020

Job No:	Drawing No:	Rev:
736	01	C

DRAINAGE STRATEGY

FOUL

- FURTHER INVESTIGATION REQUIRED TO CONFIRM CONNECTION POINT TO PUBLIC SEWER (TOPO SURVEY INDICATES SOME EXISTING DRAINAGE IN CONCRETE TRACK RUNNING ALONG EASTERN EDGE OF SITE).
- DISCUSSIONS REQUIRED WITH DCWW TO CONFIRM WHETHER THERE IS CAPACITY WITHIN THE PUBLIC SEWER TO SERVE THE PROPOSED DEVELOPMENT.
- DEPENDING ON THE LOCATION & LEVEL OF THE CONNECTION POINT, A TYPE 2 PUMPING STATION MAY BE REQUIRED – IN WHICH CASE ALTERATIONS TO THE SITE LAYOUT WOULD BE NECESSARY.
- HALF OF SITE ACCESS ROAD TO BE CONSTRUCTED WITH PERMEABLE MATERIALS, WITH THE OTHER HALF TO ACT AS A SERVICE TRENCH FOR DCWW INFRASTRUCTURE.
- IF THE FOUL NETWORK IS REQUIRED TO PASS BENEATH A PERMEABLE SURFACE, THE SYSTEM WILL BE SITUATED WITHIN A SERVICE TRENCH TO ENSURE NO SW SEEPAGE ENTERS THE FOUL NETWORK.

SURFACE WATER

- THE SW STRATEGY FOR THE SCHEME IS TO COMPLY WITH THE SIX STANDARDS OF THE SAB HIERARCHY.
- 12NO. SUCCESSFUL INFILTRATION TESTS HAVE BEEN UNDERTAKEN ON SITE, WITH RECORDED RATES INDICATING THAT EXISTING GROUND CHARACTERISTICS SHOULD BE COMPATIBLE WITH AN INFILTRATION BASED SURFACE WATER DISPOSAL STRATEGY. RECORDED RATE OF 2.27×10^{-5} m/s HAS BEEN USED DURING INITIAL SURFACE WATER CALCULATIONS.
- FURTHER INFILTRATION TESTS IN SHALLOW PITS ARE LIKELY TO BE REQUIRED DUE TO CLAY DEPOSITS BEING ENCOUNTERED TO A DEPTH OF ~0.3m.
- IN ACCORDANCE WITH THE SAB SURFACE WATER DESTINATION HIERARCHY, EACH PLOT WILL REQUIRE A WATER BUTT TO COLLECT ROOF RUN-OFF FOR PRIVATE NON-POTABLE RE-USE. EXCESS ROOF RUN-OFF TO BE DIRECTED TO POROUS PARKING AREA SUB-BASE FOR DISPOSAL VIA GROUND INFILTRATION.
- SURFACE WATER RUN-OFF FROM SITE ACCESS ROAD & PAVEMENTS TO BE DIRECTED TO PERMEABLE HALF OF THE ROAD FOR DISPOSAL VIA GROUND INFILTRATION.
- PROPOSED BIORETENTION BASIN LOCATED WITHIN THE SOUTH-EAST CORNER OF THE SITE TO COLLECT ANY EXCEEDANCE FLOW FROM THE SITE ACCESS ROAD. BASIN CAPACITY ONLY EXPECTED TO BE UTILISED FOR > 100yr STORM EVENTS.
- BASIN TO BE LANDSCAPED TO COMPLY WITH SAB BIODIVERSITY REQUIREMENT. VEGETATION SPECIFICATION TBC BY OTHERS.

GULLIES SERVING BELL-MOUTH ONLY

SAB ADOPTABLE BIORETENTION BASIN TO COLLECT ANY EXCEEDANCE FLOW FROM PERMEABLE ACCESS ROAD. BASIN TO BE LANDSCAPED TO COMPLY WITH SAB BIODIVERSITY REQUIREMENT

Maes y Meillion

INSET
SCALE 1:1000

CLOSEST PUBLIC FOUL SEWERS TO SITE – AS INDICATED ON DCWW RECORDS

GENERAL NOTES

1. DO NOT SCALE THIS DRAWING.
2. CONTRACTOR TO CHECK ALL DIMENSIONS AND REPORT ALL ERRORS AND OMISSIONS TO THE ENGINEER.
3. ANY DISCREPANCY TO BE REPORTED IMMEDIATELY TO THE ENGINEER.
4. THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, SUBCONTRACTORS AND SPECIALISTS DRAWINGS AND SPECIFICATIONS.

KEY

- SITE BOUNDARY
- ADOPTABLE ACCESS ROAD – POROUS BLOCKWORK CONSTRUCTION (500mm DEEP POROUS SUB-BASE)
- ADOPTABLE ACCESS ROAD – IMPERMEABLE BLOCKWORK CONSTRUCTION
- ACCESS ROAD TARMAC CONSTRUCTION
- PRIVATELY MAINTAINABLE PERMEABLE PARKING SPACES (800mm DEEP POROUS SUB-BASE)
- DCWW FOUL DRAINAGE (INDICATIVELY SHOWN)
- PRIVATELY MAINTAINABLE S.W. DRAINAGE
- ADOPTABLE S.W. DRAINAGE
- ADOPTABLE PERFORATED PIPEWORK
- LOCAL AUTHORITY ADOPTABLE SURFACE WATER GULLIES AND CONNECTING PIPEWORK

Rev.	Detail	By	Date

Revisions

Reinforcement schedules nos.

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Client
Mr DAFYDD RHODRI DAVIES

Project
HOUSING DEVELOPMENT – MAES Y MEILLION, LLANYBRI, CARMARTHENSHIRE

Drawing Title
DRAINAGE STRATEGY PLAN

PRELIMINARY

Project No.	Drawing No.
C1577	C-SK01
Scales: 1:250	Date: 31.07.20
Drawn: IH	Checked: DF
Revision	Sheet Size: A1

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Appendix H

CARMARTHENSHIRE PLANNING DECISION NOTICE

Cyngor Sir Gâr
Carmarthenshire
County Council

sirgar.llyw.cymru
carmarthenshire.gov.wales

TOWN AND COUNTRY PLANNING ACT 1990

Decision Notice

Outline Planning Permission Granted

Applicant

Mr D Davies
5 Close Nathanial,
Pwll Trap,
St. Clears,
SA33 5HE

Application No: **PL/00629** registered on 20/10/2020 for:

Proposal:	Proposed outline application for residential development of up to 13 units and associated works with all matters reserved
Location:	Land at Maes Y Meillion, Llanybri, Carmarthen, SA33 5HF
Application Type:	Outline planning consent - all matters reserved

Carmarthenshire County Council HEREBY GRANT OUTLINE PLANNING PERMISSION for the development proposed by you as shown on the application form, plan(s) and supporting document(s) subject to the following condition(s):

Please read the conditions listed below carefully, some conditions may require to be discharged prior to or during development.

Condition 1

Any application for approval of the reserved matters shall be made to the local planning authority not later than three years from the date of this permission.

Reason: Required to be imposed pursuant to Section 91 of the Town and Country Planning Act 1990.

Condition 2

The development shall begin either before the expiration of five years from the date of this permission or before the expiration of two years from the date of approval of the last of the reserved matters to be approved, whichever is the later.

Reason: Required to be imposed pursuant to Section 91 of the Town and Country Planning Act 1990.

Condition 3

Details of the access, appearance, landscaping, layout, and scale, (hereinafter called "the reserved matters") shall be submitted to and approved in writing by the local planning authority before any development begins and the development shall be carried out as approved.

Reason: In the interests of visual amenity.

Condition 4

The permission relates to the land defined in the 1:1250 location plan referenced 02B received on 21 May 2021.

Reason: In the interest of clarity as to the extent of the permission.

Condition 5

No development shall commence until details of a scheme for the disposal of foul and surface water has been submitted to and agreed in writing by the local planning authority. The scheme shall be implemented in accordance with the approved details prior to the occupation of the development and retained in perpetuity.

Reason: To ensure the development is drained in an acceptable manner.

Condition 6

No development, including any site clearance or works of demolition, shall commence until a Construction Environmental Management Plan (CEMP) has been submitted to and approved in writing by the Local Planning Authority. The CEMP shall be implemented as approved during the site preparation and construction phases of the development and should include:

• General Site Management:, construction programme, site clearance requirements, demolition method statement, construction drainage, site set-up plan detailing sensitive receptors and buffers zones, relevant protection measures e.g. fencing.

• Biodiversity Management: tree and hedgerow protection, invasive species management. The CEMP shall reference all biodiversity mitigation and enhancement requirements for the construction phase as referenced in the preliminary ecological assessment.

• Soil management: topsoil strip, storage and amelioration for re-use.

• Control of Nuisances: restrictions on timing/duration/frequency of works, dust control measures, control of light spill and conservation of dark skies.

• Resource Management: fuel and chemical storage, waste management, water consumption, energy consumption.

• Traffic Management: deliveries, plant on site, wheel washing facilities.

• Pollution Prevention: demonstrate compliance with relevant Guidelines for Pollution Prevention, incident response plan, site drainage plan.

• Clerk of works to ensure construction compliance with approved plans and environmental regulations.

• Details of the persons/bodies responsible for particular activities associated with the CEMP and emergency contact details.

Reason: To prevent the pollution of the environment and in the interests of safeguarding residential amenity.

Condition 7

No development shall commence until an Ecological Design Scheme (EDS) has been submitted to and approved in writing by the local planning authority. The EDS shall deliver detailed design proposals which effectively integrate appropriate site specific landscape, ecological and biodiversity objectives and functions. The scheme shall be in compliance with the principles of the landscape and ecological information contained in section 5.0 of the Preliminary Ecological Assessment prepared by Habitat Matters Ltd received on 13 October 2020. The EDS shall be implemented in accordance with the approved details.

Reason: In the interests biodiversity and visual amenity.

Condition 8

No development shall commence until details of existing ground levels and proposed finished ground and floor levels have been submitted to and approved in writing by the local planning authority. The development shall be carried out in accordance with the approved details.

Reason: In the interests if visual amenity and to safeguard the living conditions of adjacent occupiers.

Condition 9

Prior to the commencement of the development a scheme detailing the provision for a footway or footpath (with public utility suitable for adoption) connecting from the development to the U2116 roadway to the south shall be submitted for the written approval of the local planning authority. The scheme shall be implemented in accordance with the approved details before the development is occupied.

Reason: In the interests of highway and pedestrian safety.

Condition 10

Prior to its use by vehicular traffic, the new access road shall be laid out and constructed with 5.0 metre carriageway, 1.8 metre footways, and 6.0 metre kerbed radii at the junction with the U2127 road.

Reason: In the interests of highway safety.

Condition 11

The existing means of vehicular access in the north western corner of the site shall be permanently stopped up, and the public highway reinstated to the written approval of the Local Planning Authority, prior to the new means of vehicular access herein approved, being brought into use.

Reason: In the interests of highway safety.

Condition 12

The gradient of the vehicular access serving the development shall not exceed 1 in 20 for the first 15 metres metres from the edge of the carriageway.

Reason: In the interests of highway safety.

Condition 13

There shall at no time be any growth or obstruction to visibility over 0.9 metres above the adjacent carriageway crown, over the site's whole U2127 Road frontage within 2.4 metres of the near edge of the carriageway.

Reason: In the interests of highway safety.

Condition 14

Prior to any use of the access by vehicular traffic, a visibility splay of 2.4 metres x 43 metres shall be formed and thereafter retained in perpetuity, either side of the centre line of the access in relation to the nearer edge of carriageway. In particular there shall at no time be any obstruction above 0.9 metres within this splay area.

Reason: In the interests of highway safety.

Condition 15

Prior to the commencement of development the written approval of the Local Planning Authority shall be obtained for a scheme of parking and turning facilities within the curtilage of the site, and this shall be dedicated to serve the proposal. The approved scheme is to be fully implemented prior to any part of the development being brought into use, and thereafter shall be retained, unobstructed, in perpetuity. In particular, no part of the parking or turning facilities is to be obstructed by non-motorised vehicles.

Reason: In the interests of highway safety.

Condition 16

Prior to the occupation of any of the dwellings herewith approved, the required access roads and footways from the existing public highway shall be laid out and constructed strictly in accordance with the plans herewith approved, to at least the base course levels, and with the visibility splays provided.

Reason: In the interests of highway safety.

Condition 17

The development hereby permitted shall not be occupied until the speed limit on the U2127 on the site's entire road frontage and along the road to the north east within the vicinity of the site has been reduced to 30mph.

Reason: In the interests of highway safety.

Reasons for Granting Planning Permission

The decision to grant planning permission has been taken in accordance with Section 38 of the Planning and Compulsory Purchase Act 2004, which requires that, in determining a planning application the determination must be in accordance with the Development Plan unless material considerations indicate otherwise.

· The proposed development complies with Policies SP1, SP3 and GP1 of the Carmarthenshire Local Development Plan Adopted 2014 ('the LDP') in that it consists of a sustainable form of development that is compatible with neighbouring land uses, appropriate in terms of scale and design and will not cause unacceptable loss of amenity to neighbouring uses.

- The proposed development complies with Policies H1 and H2 of the Carmarthenshire Local Development Plan Adopted 2014 ('the LDP') in that it is located within the development limits of Llanybri and allocated for residential development purposes.

- The proposed development complies with Policies AH1, GP3 and REC 2 of the Carmarthenshire Local Development Plan Adopted 2014 ('the LDP') in that it will provide a proportion of affordable housing within the development and make a financial contribution towards the improvement of education and pedestrian facilities in the local area.

- The proposed development complies with Policies SP9, GP1 & TR3 of the Carmarthenshire Local Development Plan Adopted 2014 ('the LDP') in that the proposal is located in a sustainable location, will be served by a suitable access and parking provision and will not be detrimental to highway safety.

- The proposed development complies with policies EQ4, EP2 and EP3 of the Carmarthenshire Local Development Plan Adopted 2014 ('the LDP') in that it will not result in any unacceptable ecology, flooding or pollution impacts.

- The proposed development complies with policy GP4 of the Carmarthenshire Local Development Plan Adopted 2014 ('the LDP') in that it will be served by infrastructure that is adequate to meet the needs of the development.

Note 1

Please note that this consent is specific to the plans and particulars approved as part of the application. Any departure from the approved plans will constitute unauthorised development and may be liable to enforcement action. You (or any subsequent developer) should advise the Council of any actual or proposed variations from the approved plans immediately so that you can be advised how to best resolve the matter.

In addition, any Conditions which the Council has imposed on this consent will be listed above and should be read carefully. It is your (or any subsequent developers') responsibility to ensure that the terms of all Conditions are met in full at the appropriate time (as outlined in the specific condition).

The commencement of development without firstly meeting in full the terms of any Conditions which require the submission of details prior to the commencement of development will constitute unauthorised development. This will necessitate the submission of a further application to retain the unauthorised development and may render you liable to formal enforcement action.

Failure on the part of the developer to observe the requirements of any other Conditions could result in the Council pursuing formal enforcement action in the form of a Breach of Condition Notice.

Note 2

Comments and guidance received from consultees relating to this application, including any other permissions or consents required, is available on the Authority's website *(www.carmarthenshire.gov.uk)*.

Note 3

The applicant/developer is advised that this permission is granted subject to the completion of a Section 106 Agreement/Unilateral Undertaking securing a proportion of affordable housing as part of the development and the provision of a commuted payment towards the improvement of education and pedestrian facilities in the local area.

Note 4

This application has been determined within the scope of the delegated authority granted to the Head of Planning by the Meeting of Carmarthenshire County Council on 12 October 2011 (Minute No 7 refers).

DATED: 05/08/2022

Rhodri Griffiths

Pennaeth Lle a Chynaliadwyedd / Head of Place and Sustainability

PLEASE NOTE: Your attention is drawn to the attached notes which explain, amongst other things, your right of appeal against this decision.

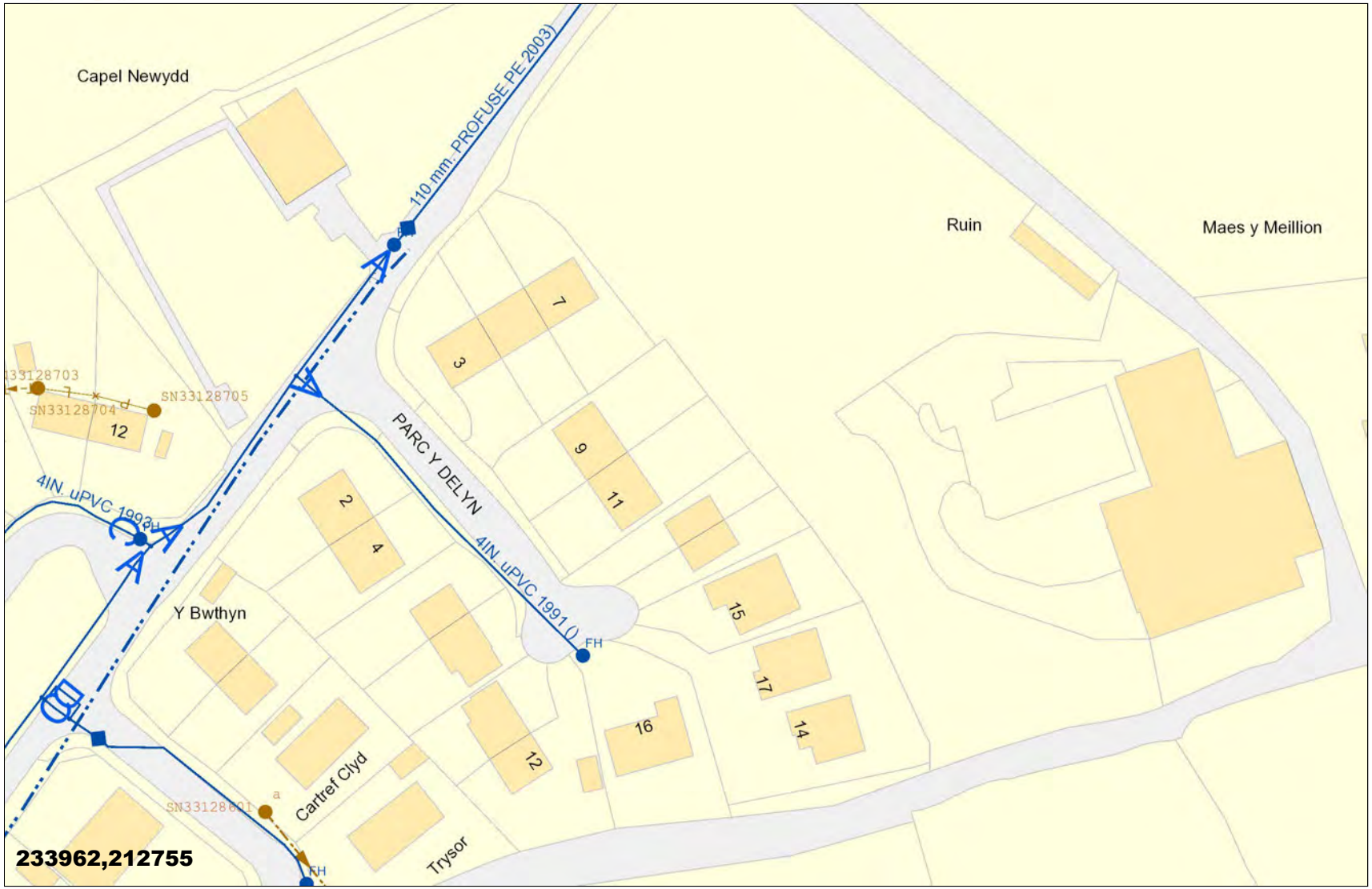
Appendix J

DCWW WATER MAIN PLAN

Dŵr Cymru
Welsh Water

17/04/2020

Scale: 1: 952



LEGEND

Clean Water

- Sluice Val
- Air Val, SINGLE
- Tap
- Pressure Reducing Valve
- Meter
- BULK Meter
- FH
- Cap
- Existing Main
- NON COMPANY

Sewerage External

- Foul
- Surface Water
- Combined
- Rising Main
- Private
- Treatment Works
- Pumping Station
- Special Purpose
- Unknown End
- Change, Combined Overflow
- Outfall, FOUL
- Lamp Hole, Foul
- Private Sewer Transfer
- Lateral Drain
- Inspection Chamber

Dwr Cymru Cyfyngedig ('the Company') gives this information as to the position of its underground apparatus by way of general guidance only and on the strict 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 and any onus of locating the apparatus before carrying out any excavations rests entirely on you. The information which is supplied hereby the company, is done so in accordance with statutory requirements of sections 198 and 199 f the water industry Act 1991 based upon the best Information available and in particular, but without prejudice to the generality of the foregoing, it should be noted that the records that are available to the Company may not disclosure the existence of a drain sewer or disposal main laid before 1 September 1989, or if they do, the particulars thereof including their position underground may not be accurate. It must be understood that the furnishing of this information us entirely without prejudice to the provision of the New Roads and Street Works Act 1991 and the company's right to be compensated for any damage to its apparatus.

EXACT LOCATION OF ALL APPARATUS TO BE DETERMINED ON SITE

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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

Appendix K

ESTIMATED SuDS CONSTRUCTION COSTS

Cost of Drainage Works associated with SuDS

Summary

1	Stormwater pipework	£	315.35
2	Installation of Manholes and associated fittings	£	1,102.50
3	Permeable Paving	£	53,169.23
	Total	£	54,587.08

The above works have been priced and allocated in conjunction with Intrado Consulting Engineers Drawings