

## **13 COMMUNITY AND PRIVATE ASSETS**

### **13.1 Introduction**

This chapter of the Environmental Statement describes the assessment of effects on community and private assets resulting from the Scheme, as it is described in chapters one and two of this ES. The assessment has been carried out by following the guidelines outlined in DMRB IAN 125/09(W).

The first part of this chapter - 'Private property, associated land-take, land used by the community and development land' - assesses the effects of the Scheme on private and community assets, including:

- Private property and associated land take e.g. demolition of houses, loss of gardens
- Land used by the community e.g common land, town and village greens, allotments and public open space
- Development land – as allocated in local development plans
- In addition, waterway restoration and development proposals are considered where relevant.

This chapter also refers to Chapter 12 – Effects on All Travelers, which considers the impact of the Scheme on access by travelers to the following services which are relevant to this chapter:

- Health – i.e. Hospitals, care homes
- Schools
- Services – i.e. community centres, libraries
- Supermarkets
- Places of worship
- Leisure – i.e. parks, play areas, sports centres and other recreational areas

The second part of this chapter – 'Effects on agricultural land' – is concerned specifically with the effect of the Scheme on land used for agricultural purposes.

### **PART 1 - PRIVATE PROPERTY, ASSOCIATED LAND-TAKE, LAND USED BY THE COMMUNITY AND DEVELOPMENT LAND**

#### **13.1.1 Policy context**

#### **13.1.2 Planning Policy Wales (Edition 8) 2016**

The PPW (ED. 8) 2016 sets out the land use planning policies of the Welsh Government (WG) and is supplemented by a series of Technical Advice Notices (TAN). It *'translates the WG commitment to sustainable development into the planning system so that it can play an appropriate role in moving towards sustainability.'*

Section 4 brings in the Well-being of Future Generations (Wales) Act 2015 (refer to section 4 of this ES) and includes objectives which address the seven well-being goals. In relation to community and private assets, the following objectives are applicable to the Scheme:

- A More Equal Wales

*'Promote access to employment, shopping, education, health, community, leisure and sports facilities and open and green space, maximising opportunities for community development and social welfare'.*

These objectives are relevant to this chapter, and chapter 12 – Effects on All Travellers, as the chapters address the impact of the Scheme on the community's ability to access such services as those listed above.

- A Wales of Cohesive Communities

*'Foster improvements to transport facilities and services which maintain or improve accessibility to services and facilities, secure employment, economic and environmental objectives, and improve safety and amenity. In general, developments likely to support the achievement of an integrated transport system should be encouraged.'*

- *'Foster social inclusion by ensuring that full advantage is taken of the opportunities to secure a more accessible environment for everyone that the development of land and buildings provides. This includes helping to ensure that development is accessible by means other than the private car.'*

These objectives are relevant to this chapter, and chapter 12 – Effects On All Travellers, as the Scheme may be considered an improvement to transport facilities which maintains and improves access to services and facilities. Chapter 12 specifically addresses the impact of the Scheme on non-motorised users, i.e. means other than private car.

#### 13.1.3 PPW Technical Advisory Note (TAN) 6

TANs provide technical advice and guidance on Welsh policy. They should be taken in to account by planning authorities in the preparation of development plans. TAN 6 provides guidance on how the planning system can contribute to:

- Sustainable rural economies;
- Sustainable rural housing;
- Sustainable rural services; and
- Sustainable agriculture

This chapter addresses the impact of the Scheme on development land (including employment land) and thus is pertinent to the 'Sustainable rural economies' aspect of the TAN. The 'sustainable rural services' aspect states that *'planning authorities should adopt a positive approach to planning proposals designed to improve the viability, accessibility or community value of existing services and facilities'*. The impact on rural services and facilities is covered in this chapter and chapter 12 of this ES.

#### 13.1.4 PPW TAN 16

PPW requires local planning authorities to provide a framework for well-located sport, recreation and leisure facilities. TAN 16 provides guidance on how local development plans should set out the strategic vision for the authority with regard to providing, protecting and enhancing facilities for sport and recreation.

This chapter covers the impact of the Scheme on open spaces and sport facilities.

13.1.5 The Active Travel (Wales) Act 2013

The Active Travel (Wales) Act 2013 completed its passage through the National Assembly for Wales in November 2013 and came into force in 2014. In relation to community and private assets affected by the Scheme, the following goal can be considered relevant:

*'A Wales of vibrant culture and thriving Welsh language - A society that promotes and protects culture, heritage and the Welsh language, and which encourages people to participate in the arts, and sports and recreation.'*

This is due to the requirement of 'open space' for the participation of sports and recreation. Open space in the context of the Scheme is addressed within this chapter.

The Act also specifically makes provision for:

*'...requiring the Welsh Ministers and local authorities, in constructing and improving highways, to have regard to the desirability of enhancing the provision made for walking and cycling.'*

This aspect is addressed in the Effects on All Travellers which forms chapter 12 of this ES.

13.1.6 Countryside and Rights of Way (CROW) Act 2000

The CROW Act 2000 received Royal Assent on 30 November 2000. The Act:

*'provides for public access on foot to certain types of land, amends the law relating to public rights of way, increases measures for the management and protection for Sites of Special Scientific Interest (SSSI) and strengthens wildlife enforcement legislation, and provides for better management of Areas of Outstanding Natural Beauty (AONB). The Act is compliant with the provisions of the European Convention on Human Rights, requiring consultation where the rights of the individual may be affected by these measure'*

The Act also provides and improves rights in relation to:

- **Access to the countryside:** provides a new right of public access on foot to areas of open land comprising mountain, moor, heath, down, and registered common land, and contains provisions for extending the right to coastal land. The Act also provides safeguards which take into account the needs of landowners and occupiers, and of other interests, including wildlife.
- **Public rights of way and road traffic:** The Act improves the rights of way legislation by encouraging the creation of new routes and clarifying uncertainties about existing rights. Of particular relevance to nature conservation, the Act introduces powers enabling the diversion of rights of way to protect SSSIs

Although the Act is concerned with public rights of way, the Scheme does not pass through any SSSI, AONB or open or common land and thus is not applicable to it.

13.1.7 Highways Act 1980

The Highways Act 1980 deals with the management and operation of the road network in England and Wales.

Part 12: Acquisition, Vesting and Transfer of Land lays out the mechanisms available for purchasing land for the construction of the Scheme, including Compulsory Purchase Orders, which are employed to acquire land where applicable.

13.1.8 Policy context - Local policies and plans

In relation to effects on development and community land, policies and plans most relevant to the assessment are development planning policies from the current Gwynedd Unitary Development Plan (UDP) 2001-2016 (hereafter referred to as the UDP) and the Anglesey and Gwynedd Deposit Joint Local Development Plan (JLDP) Written Statement 2015 (hereafter referred to as the Deposit JLDP). The formal adoption of the JLDP is not expected until early 2017.

Policies that are of relevance to the land use assessment are listed below:

13.1.9 Adopted Gwynedd Unitary Development Plan (UDP) 2001-2016 policies

*Chapter B – Effective Protection of the Environment*

Protected Countryside and Open Spaces

- B11 – Open spaces between or in villages or towns
- B12 – Protecting historic landscapes, parks and gardens
- B23 – Amenities

*Chapter C – Prudent use of natural resources*

Effective use of land and buildings

- C1 – Locating new development
- C2 – Adopting the sequential approach
- C28 – Safeguarding agricultural land

*Chapter CH – Ensuring social progress that recognises the needs of everyone*

General housing developments

- CH1 – New houses on allocated sites
- CH2 – Supply of land for housing
- CH3 – New houses on unallocated sites within the development boundaries of the sub-regional centre and urban centres.
- CH4 – New dwellings on unallocated sites within the development boundaries of local centres and villages
- CH5 – New dwellings in rural villages
- CH6 – Affordable housing on all allocated sites in the plan area and on unallocated sites within the development boundaries the sub-regional centre and the urban centres
- CH7 – Affordable housing on rural exception sites directly adjoining the boundaries of villages and local centres
- CH9 – New dwellings in open countryside
- CH16 – Gypsy sites
- CH42 – Safeguarding open spaces of recreational value
- CH43 – Provision of open spaces of recreational value in new housing developmen

*Chapter D – Maintaining appropriate growth in the economy and employment*

Sustainable economy



- D1 – High quality employment sites
- D2 – Industrial sites
- D3 – Allocation of additional employment land
- D5 - Special location needs
- D6 – Industrial / Business units within development boundaries
- D8 – Expansion of existing enterprises

13.1.10 Anglesey and Gwynedd Deposit Joint Local Development Plan (JLDP) 2015 policies

*Safe, Healthy, Unique and Active Communities*

- PS1 – Welsh language and culture
- PS10 – Providing opportunity for a flourishing economy
- PS11 – The visitor economy
- PS14 – Affordable housing

*Living Sustainably*

- PCYFF1 – Development criteria

*Safe, Healthy, Distinctive and Vibrant Communities*

- ISA2 – Community facilities
- ISA4 – Safeguarding existing open space
- ISA5 – Provision of open spaces in new housing developments

*Economy and Regeneration*

- CYF1 – Safeguarding and allocating land and units for employment use
- CYF6 – Regeneration sites

*Supply of Housing*

- TAI1 – Appropriate housing mix
- TAI5 – Local market housing
- TAI11 – Safeguarding existing gypsy and traveller sites
- TAI13 – Sites for gypsies and traveller pitches
- TAI16 – Housing in service villages
- TAI18 – Housing in clusters

## 13.2 Methodology

This chapter provides an environmental assessment of the potential effects of the Scheme on community and private assets. It is a topic chapter in the DMRB Volume 11, Section 3 (Environmental Assessment Techniques) and was introduced under IAN 125/09(W). At present the Environmental Assessment Techniques section of the DMRB Vol. 11 is being revised and there is currently no specific methodology developed for 'Community and Private Assets'. The IAN therefore advises that existing methodologies in relation to Land Use and Community Effects are utilised.

The assessment will address the following key issues:

- Demolition of private property and associated land-take;

- Loss of land used by the community and community facilities;
- Effects on development land;

Assessment of Waterway restoration projects has been scoped out as none are present within the scope of the Scheme.

#### *Study area*

The study area for this assessment is not clearly defined, in that it takes in to account any receptors highlighted previously (i.e. private property, community land) that is affected by the Scheme, and not a specific geographic area. Data used in this assessment cover the county of Gwynedd.

### 13.2.1 Methodology - Demolition of private property and associated land take

Demolition of private property and associated land-take will be assessed as follows using the following method, as described in DMRB Volume 11 Section 3, Part 6 for a Stage 3 Assessment:

- *The number of properties which would need to be demolished should be estimated for residential, commercial (including farming), industrial and other properties at risk of demolition or land-take (excluding community facilities). Where relevant, the assessment of impact on businesses should be updated.*
- *When reporting the possible effects of a scheme on businesses, it may be necessary to treat sensitive information as 'commercial in confidence'. Such information should not be included in reports which will be publically available.*

The effects on private property and land associated with agriculture is assessed separately in the second part of this chapter (Section 13.8 – Effects on agricultural land).

### 13.2.2 Methodology - Loss of land used by the community

Loss of land used by the community will be assessed using the following method, as described in DMRB Volume 11 Section 3, Part 6 for a Stage 3 Assessment. Effects on key community facilities in the vicinity of the Scheme are noted in Chapter 12 of this ES:

- *Where land-take would be likely to occur, obtain information about the number of users. In some cases the local planning authority may be able to provide information, but in many cases it will be necessary to visit the site and, depending on its importance, either make an estimate of usage or undertake a formal count. The site visit should take place on one or more 'typical' days (for example, a weekday during the school term or at the weekend);*
- *A desk-top study should also be carried out to determine any cultural associations of the land in question. Information on historical, literary, artistic and other connections can be obtained from local libraries and museums or the local planning authority;*
- *If Public Open Space is to be taken, identify whether there is land in the vicinity which could be offered as exchange land. If so, this should be assessed to ensure that it is no smaller and is equally advantageous to users as that which would be required for the preferred route.*
- *The assessment should set out the scheme's impact on land used by the public, taking account where relevant of exchange land to be provided in mitigation.*

Community land that may have other conservation, landscape or heritage value is covered in Chapter 6 – Cultural Heritage, Chapter 7 – Landscape and Chapter 9 – Nature Conservation respectively.

Chapter 12 – Effects on All Travellers, covers the impact of the Scheme on individuals and communities in their ability to access key services and community facilities. Figure 12.2 – NMU Construction Impact and Mitigation, although concerned with non-motorised users, shows some of the key trip generators and services in the context of the Scheme and their proximity to it.

### 13.2.3 Methodology - Effects on development land

Effects on development land will be assessed using the following method, as described in DMRB Volume 11 Section 3, Part 6 for a Stage 3 Assessment:

- *Plot route option on a map of land use planning designations (refer to Volume 2, Figures 13.1 and 13.2).*
- *Identify the potential land-take of the route option from areas which the local planning authorities have designated for future development.*
- *Assess how route options might affect local planning authority's development designations.*
- *The local planning authority should be asked through the Overseeing Department's Project Manager, to give their views on how the preferred route may affect their development designations.*

### 13.2.4 Data collection and sources of information used

In terms of land use and ownership, a combination of desk based research, questionnaire surveys and meetings with affected parties have been undertaken. This includes:

- Searches of Land Registry information;
- Issuing of questionnaires to affected parties;
- Meetings held with affected parties.

From this work, a detailed knowledge of land ownership interests affected by the Scheme has been collated. In relation to assessing impacts on development land, the assessment has considered land allocated for housing and employment within the UDP and Deposit JLDP. Supporting these documents are the UDP and Deposit JLDP 'Proposals Maps', which can be accessed via the Gwynedd Council website. Responses from Gwynedd Council's Planning Department have also informed this assessment, and a response to the Scheme from the Council is given in section 13.4.

### 13.2.5 Assessment criteria - Private property, community and development land

The criteria used to assess impacts on private property and associated land take, land used by the community and development land is outlined in tables 13.2.1 and 13.2.2 below. These tables are used to determine the significance of effects on property and land and have been adapted from the guidance in DMRB HA 205/08. They take in to account the magnitude of impact and the sensitivity of a receptor (property or area of land), and assign an overall significance of impact, using the matrices given in table 13.2.3.

### 13.2.6 Typical descriptors

**Table 13.2.2 Magnitude of impact assessment criteria – Typical descriptors**

Magnitude of impact	Assessment Criteria
<b>Large Adverse</b>	Where houses would be demolished, become uninhabitable and inaccessible or lose more than 50% of their garden land

Magnitude of impact	Assessment Criteria
	<p>The viability of a business / community facility using the land is threatened due to land-take.</p> <p>The viability of a site designated for development within the Local Authority's current development plan is threatened due to land take.</p> <p>A significant proportion of land used by the community would be threatened due to land take.</p>
<b>Moderate Adverse</b>	<p>Where a property would suffer a permanent negative impact from losing between 10 and 50% of their garden land</p> <p>The viability of a business / community facility using the land is not threatened, however significant changes may be experienced in its day-to-day running and/or its size and scale.</p> <p>A site designated for development within the Local Authority's development plan is still viable, but the developable area is reduced by 25 - 50%.</p> <p>A moderate proportion of land used by the community would be threatened due to land take.</p>
<b>Slight Adverse</b>	<p>Where a house would lose less than 10% of their garden land</p> <p>The viability of a business using the land is not threatened and land-take may involve only the acquisition of redundant or infrequently used land not essential to the running of the business or disused/infrequently used buildings.</p> <p>A site designated for development within the county council's development plan is still viable, but the developable area is reduced by 25% or less.</p> <p>A minor proportion of land used by the community would be threatened due to land take.</p>
<b>Neutral</b>	The scheme would have no significant impact upon existing land uses.
<b>Beneficial</b>	Additional areas of land which the public can access are made available by the scheme.

**Table 13.2.2 Receptor sensitivity – Typical descriptors**

Sensitivity	Examples of Receptors
<b>High</b>	<p>Private properties and associated land which are currently occupied or which house a business or community facility currently in use</p> <p>A site designated for development within the local authority's Development Plan, where planning permission has been granted to develop</p> <p>Land which the public have the right to access and which is frequently used by the community</p>
<b>Moderate</b>	<p>Private properties and associated land which are not permanently occupied by either the person(s) living in that property or by a business / community facility or which is not essential to the day to day running of a business</p> <p>A site designated for development within the Local Authority's Development Plan, but where no proposals to develop have currently been made.</p> <p>Land which the public have the right to access, which is sometimes or infrequently used by the community</p>
<b>Low</b>	<p>Private properties and associated land, which are derelict or not currently in use.</p> <p>A site which is being considered as a candidate site for inclusion within the forthcoming Local Development Plan</p> <p>Land which is infrequently used by the community or is used as an unofficial open space</p>

**Table 13.2.3 Significance of effect – Typical descriptors**

Magnitude	Sensitivity		
	High	Moderate	Low
<b>Large Adverse</b>	Major Adverse	Major- Moderate Adverse	Moderate – Minor Adverse
<b>Moderate Adverse</b>	Major – Moderate Adverse	Moderate – Minor Adverse	Minor Adverse
<b>Slight Adverse</b>	Moderate – Minor Adverse	Minor Adverse	Minor / Negligible
<b>Neutral</b>	Negligible	Negligible	Negligible

13.2.7 Limitations and assumptions

There is no published guidance on the assigning of magnitude of impact and receptor sensitivity for effects on community and private assets. The criteria on which the assessment is based (as shown in Tables 13.2.1 and 13.2.3) is provided to try and logically quantify the levels of impact and sensitivity so an assessment can be made, and is based on the findings of the data collection methods used in section 13.2.

**13.3 Baseline Conditions**

13.3.1 Baseline Conditions - Private property

Private property within the vicinity of the Scheme mainly consists of residential, commercial and agricultural property. Towards the southern, western end of the Scheme, it doglegs to the west around the village of Bontnewydd, joining the A487 at Llanwnda. At the central, western section of the Scheme, it enters a largely commercial area, passing the Cibyn Industrial Estate and Dwyfor Oils Ltd to the east of Caernarfon and Glan Gwna Holiday Park to the southeast. At the northern end the Scheme, there is mainly agricultural land, with small, isolated farms. Parciau Solar Farm is situated to the south of the Griffiths Crossing at the northern end of the Scheme. A number of individual residential properties and farmhouses are also located close to the Scheme along its full length. The Scheme passes between the residential areas of Caernarfon and Caeathro at its central section where it would cross the A4085(T) (refer to Volume 2, Figure 13.1 and 13.2).

13.3.2 Baseline Conditions - Land used by the community and community facilities

Within this assessment, land used by the community includes land which is designated as 'Protected Open Space' and 'Protected Play Area' under the UDP (refer to section 13.1.2). It also includes land on which the public have the 'right to roam' under the Countryside Rights of Way Act, although none of this 'open access land' would be affected by the Scheme.

Land which does not have any formal designation, but where there is evidence that it is well used on an informal basis is addressed by this assessment.

There are several public rights of way affected by the Scheme, which are used for recreation. The impacts of these are addressed in Chapter 12 – Effects on all Travellers.

13.3.3 Baseline Conditions - Development land

Appendix 3 of the UDP lists housing allocations for Gwynedd's dependency catchment areas. Table 13.3.1 below shows housing allocations local to the Scheme:

**Table 13.3.1 UDP Housing allocations in the Caernarfon Dependency Catchment Area**

<b>Caernarfon Dependency Catchment Area</b>				
<b>Settlement</b>	<b>Location</b>	<b>Area (ha)</b>	<b>No. of units</b>	<b>% affordable homes</b>
Bethel	Near Bro Eglwys	0.8	24	40

Bontnewydd	Near Cefn Werthyd	0.9	27	30
Caeathro	Near Caeathro Bach	0.75	23	35
Caernarfon	Near Glan Peris	3.8	114	35
Caernarfon	Near Llanbeblig Cemetery	4.1	123	35
Dinas	Rear Talardd	0.9	27	25

There are areas of land in the Caernarfon and Bontnewydd locality that are designated as Housing Allocation (with and without planning permission) and Employment Sites under the Deposit JLDP (refer to Volume 2, Figure 13.1). Housing Allocation without Planning Permission (T60) is allocated to the northern end of the Bontnewydd Development Boundary, east of the A487(T). On the western edge of the boundary there is Housing Allocation with Planning Permission (T59). Due to the distance from it, the Scheme would not have an impact on these allocations, however there may be cumulative effects if the construction of the Scheme were to coincide with construction of housing within these allocations. There would potentially be a future improvement to the value of this housing allocation as a result of the Scheme, from improved access to transport links and a reduction in traffic around local roads.

The UDP designates the Cibyn Industrial Estate to the southeastern development boundary of Caernarfon, as a 'Safeguarded Employment Site'. The Deposit JLDP classifies the same area as an 'Employment Site' (refer to Volume 2, Figure 13.1) and as a 'Strategic Sub-regional Site' in Policy CYF1. Under this policy, Strategic Sub-regional Sites are defined as:

*'Sites with a more general and localised focus on economic development than regional strategic sites with a focus on attracting employers that draw a workforce from wider than the local area.'*

Further guidance states that:

*'It is important that the [Joint Local Development] Plan provides an appropriate portfolio of employment land in terms of range, quality and quantity to meet the local demand for employment land and units. Safeguarding the sites... is a means of ensuring that this need is met'*

## **13.4 Predicted Environmental Effects**

### **13.4.1 Construction impacts - Private property and associated land take**

The Scheme would not require the demolition of any residential properties, but would result in the permanent loss of land such as gardens at the following private residential properties. Other properties associated with agriculture are covered in Part 2:

- Morogoro
- Caegwynedd
- Cae Phillip
- Tyddyn Bistle

It would also affect other residential land, however, most of this would only constitute the adjacent half road widths of existing highways which would be improved and are presumed to be owned by these properties.

Table 13.4.1 below shows the total permanent and temporary land loss by type.



**Table 13.4.1 Hectares (ha) of permanent and temporary land loss by type**

Type of land take	All	Residential	Agricultural	Other (e.g highways etc)	Glan Gwna Holiday Parc	Dwyfor Oils
Permanent	71.36	2.23	55.64	10.34	2.99	0.16
Temporary	48.74	0.35	40.52	4.44	3.39	0.04
Rights	3.24					
Title mitigation	8.25					

The Scheme would also affect approximately 7.44ha of private commercial land (agricultural land is considered in Part 2) during the construction phase (temporary and permanent). This is in relation to the Glan Gwna Holiday Park (6.38ha), Dyfor Oils (0.2ha) and Parciau Solar Farm (0.86ha). These businesses and the impact the Scheme would have on them are described below.

#### *Glan Gwna Holiday Park*

The Scheme would cross both existing developed land and land with planning permission for the future development of caravan pitches. There would be an embankment to the south of the River Seiont and an attenuation pond (Pond 7) constructed immediately to the west of the embankment, with another (Pond 8) on the central, northern boundary of the Holiday Park, near the Cibyn Industrial Estate. Site visits, a review of aerial mapping and consultation with the Holiday Park, confirm that Pond 7 would be located on land for which the Holiday Park has had planning permission for 75 new caravans since 2006. It is not known how much of the infrastructure works for this area have already been completed, however there are no formal camping or caravan pitches in place in this area at present. The current embankment proposal, bridge abutment arrangement and associated environmental mitigation (planting) on the south of the river, would preclude the Holiday Park from installing approximately 44 of the 75 caravans, as this land would be taken up by the permanent works.

A temporary working area (Essential License) of approximately 2.5ha of land owned by the Holiday Park would be required for the purposes of construction, material movements and storage. This land would not need to be retained by the Welsh Government following completion of construction works.

Throughout most of the area to the south of the river, the permanent works (including environmental mitigation), are located upon land which would also be needed for the construction process.

The bridge piers and abutment on the north side of the river would result in the displacement of approximately 31 caravans. Approximately 10 of these would be permanently displaced. The remaining 21 caravans would need to be displaced temporarily for construction purposes.

### *Dwyfor Oils*

Dwyfor Oils is located at the south eastern development boundary of the Cibyn Industrial Estate to the south east of Caernarfon (refer to Volume 2, Figures 13.1 and 13.2). The business is a gas and oil distribution facility, part of which is franchised out to Calor Gas. An area of land approximately 0.15ha would be required as Title from Dwyfor Oils and would be permanently lost. This would result in the loss of an area that is currently used bottle and store gas containers.

### *Parciau Solar Farm*

A total of 0.42ha of land would be taken from the owners of Parciau Farm, who have a solar farm located to the south of the Griffiths Crossing to the north end of the Scheme. This land would be taken as Title and would be required for both permanent and temporary works for access to land owned by Crug Farm Nurseries.

A further area of approximately 0.5ha is required as Essential License by the Contractor for the purposes of temporary storage of materials during the construction phase. This land would not need to be retained following construction.

#### 13.4.2 Construction Impacts - Land used by the community

No land designated as 'Protected Open Spaces and Play Areas' under the UDP or Deposit JLDP would be affected. Effects on Public Rights of Way used for recreational walking are assessed in Chapter 12 of this ES – Effects on all Travellers. The magnitude of impacts on land used by the community is therefore considered to result in No change.

#### 13.4.3 Construction Impacts - Development land

As discussed in Section 13.2, Gwynedd Council's planning policy department was contacted to provide comment on how the preferred route would impact any of the council's designated development land. The following response was provided on November 24<sup>th</sup> 2015:

*'The adopted development plan that includes the land required for the Scheme is the Gwynedd Unitary Development Plan (UDP). The UDP was adopted in July 2009 and therefore pre-dates the Scheme. The UDP will eventually be replaced by the emerging Anglesey and Gwynedd Joint Local Development Plan (Joint LDP). The Joint LDP sets out the Isle of Anglesey County Council and Gwynedd Council's policies for the development and use of land up to 2026 in Anglesey and in the Gwynedd Local Planning Authority area. It is anticipated that the Joint LDP will be adopted in Spring 2017, having been the subject of a Public Examination during 2016. The Joint LDP's written statement provides the context for the Joint LDP, the Joint LDP's Strategy and a range of policies for making planning decisions.'*

*The Scheme would impact on a small part of Cibyn Industrial Estate, Caernarfon, which is land safeguarded as an employment site in both the UDP and the Joint LDP. Whilst the emerging Joint LDP is not at a stage where its policies can be used for development management purposes, it does set the direction of travel being pursued by Gwynedd Council. Apart from a relatively small piece of land in the southern part of the site, Cibyn Industrial Estate is taken up by plots occupied by existing businesses. There are a few unoccupied buildings on the Estate.'*

*Strategic Policy 12 and Policy CH25 in the UDP, and Policy PS4 and Policy TRA1 in the Joint LDP encourage development that improves the community and businesses' access to services and facilities. The Scheme is included under Policy TRA1 – Transport network developments, and the protected route location is included within the Proposals Map as well as the Inset Maps for Bontnewydd (33), Caernarfon (6) and Dinas (65). Policy PS5 supports development that will, for example, deliver investment in the identified Centres, such as*

*Caernarfon, as well as Villages, and incorporate measures that ensure residents and businesses have good access to services and facilities.*

*It is understood that the impact of the Scheme on existing properties that may be directly affected by the Scheme will be addressed in the Community and Private Assets section of the Environmental Statement. The Scheme, when operational, will form the main arterial route running immediately to the east of Caernarfon. It is considered that it should improve accessibility to Cibyn Industrial Estate on the basis that vehicles, which include large lorries, that need to service businesses on the Estate have to navigate roads/ streets within Caernarfon or navigate a series of bends from an easterly direction along the A4086 (Llanberis Road) and the B road that links Pontug with the A487 at the Griffiths Crossing roundabout.'*

The safeguarded employment area of the Cibyn Industrial Estate would be affected by the Scheme, with 0.15ha of land being lost permanently along the south-eastern boundary.

No other land designated as development land under the UDP or Deposit JLDP would be affected by the Scheme. The Significance of Impacts on development land is therefore considered to be Slight-Adverse.

The impacts on private property, land used by the community, development land and associated land take prior to mitigation during the construction phase are shown in Table 13.4.2 below.

**Table 13.4.2 Construction impacts on private property, land used by the community and development land and associated land take - Prior to mitigation**

Receptor	Description of impact	Sensitivity	Magnitude	Significance	Comments / notes
<b>Private property</b>					
Glan Gwna Holiday Park	Loss of land to the west of the park	High	Moderate Adverse	Major - Moderate Adverse	2.5ha of land containing 10 static caravan pitches would be taken permanently by the Scheme.
Dwyfor Oils Ltd	Loss of land	High	Slight Adverse	Moderate – Minor Adverse	The Scheme would result in the loss of 0.15ha land. The Cibyn Industrial Estate is a 'Strategic Sub-regional Site (main)' under policy CYF1 of the Deposit JLDP. Planning permission.
Parciau Solar Farm	Loss of land	High	Slight Adverse	Moderate - Minor Adverse	0.42ha of grazing land would be lost but this is not anticipated to impact the solar farm business.

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Morogoro	Loss of land	High	Slight Adverse	Moderate – Minor Adverse	0.03ha (13%) land would be permanently acquired. This includes subsoil under the half width of the existing road adjacent to the property, which is not included in the overall area of the estate (0.2ha)
Caegwynedd	Loss of land	High	Moderate Adverse	Major – Moderate Adverse	0.25ha (34.6%) of land would be permanently acquired.
Cae Phillip	Loss of land	High	Slight Adverse	Moderate – Minor Adverse	0.06 (2.8%) of land would be permanently acquired.
Tyddyn Bistle	Loss of land	High	Slight Adverse	Moderate – Minor Adverse	0.36ha (9.7%) of land would be permanently taken.
<b>Land used by the community</b>					
Protected Open Spaces	None	Low	Neutral	Negligible	No open spaces would be affected by the Scheme
Play areas	None	Low	Neutral	Negligible	No play areas would be affected by the Scheme
Non-designated land used by the community	None	Low	Neutral	Negligible	No non-designated land used by the community
<b>Development land</b>					
Cibyn Industrial Estate	Loss of land	Moderate	Slight Adverse	Minor Adverse	Loss of approximately 0.15ha development land currently occupied by Dwyfor Oils Ltd (as described in Private Property).

#### 13.4.4 Operational impacts - Private property and associated land take

Approximately 3.86ha of residential land would be required during the operational phase prior to mitigation (permanent land take). Operational impacts prior to mitigation are considered the same as for construction impacts (refer to Table 13.4.2).

- 13.4.5      Operational Impacts - Land used by the community
- No land allocated as 'protected open space' or 'protected play area' within the UDP or Deposit JLDP would be affected. The magnitude and significance of impacts are therefore Neutral and Negligible as per the construction phase.
- 13.4.6      Operational Impacts - Development land
- The safeguarded employment area of the Cibyn Industrial Estate would be affected by the Scheme, with 0.15ha of land being lost permanently along the south-eastern boundary.
- The land designated for housing in both the UDP and Deposit JLDP would not be affected by the Scheme. The magnitude and significance of impacts are therefore Slight-Adverse, as per the construction impacts.
- 13.5      Proposed mitigation**
- 13.5.1      Construction mitigation – Demolition of private property and associated land take
- For those commercial premises and land holdings affected by the Scheme appropriate compensation, improvement works or changes to access would be provided where applicable. Where access is affected to private properties and businesses, temporary access would be provided. The Scheme would not require the demolition of private property. Mitigation in the form of financial compensation would be provided to those private property owners where land attached to the property is taken or negatively affected by the Scheme. In relation to land take which results in additional impacts on top of the land take itself (e.g noise, visual impacts due to the proximity of the Scheme etc), specific mitigation is discussed in the respective chapters of this ES (e.g. Chapter 11 -Noise and Vibration, Chapter 7 - Landscape).
- 13.5.2      Construction mitigation – Loss of land used by the community
- As the assessment has not identified any impacts on land used by the community, no construction mitigation is proposed.
- 13.5.3      Construction mitigation - Effects on development land
- The loss of land to the Cibyn Industrial Estate is the only effect the Scheme would have on development land. This would be mitigated by providing financial compensation and improvements to access to Dwyfor Oils Ltd who currently occupy this development land. This is covered in table 13.6.1.
- 13.5.4      Operational mitigation – Demolition of private property and associated land take
- There are no requirements to demolish private properties in relation to the Scheme. Improved access would be provided where land is required for the maintenance of the highway during operation.
- 13.5.5      Operational mitigation - Loss of land used by the community
- As the assessment has not identified any impacts on land used by the community, no operational mitigation is proposed.
- 13.5.6      Operational mitigation - Effects on development land
- Operational mitigation of the effects on development land is the same as the construction mitigation outlined in 13.5.

**13.6 Residual Environmental Effects (following mitigation)**

13.6.1 Residual Environmental Effects (following mitigation) - Construction

*Demolition of private property and associate land take*

The residual construction impacts are shown in Table 13.6.1 below.

**Table 13.6.1 Construction impacts on private property, land used by the community and development land and associated land take- Following mitigation**

Receptor	Description of impact	Magnitude (prior to mitigation)	Significance (prior to mitigation)	Mitigation	Magnitude (following mitigation)	Significance (following mitigation)
Glan Gwna Holiday Park	Permanent loss of land to the west of the park (2.5ha) including 10 static caravans.	Moderate Adverse	Major-Moderate Adverse	Appropriate compensation/ changes to access where applicable.	Slight Adverse	Major– Moderate Adverse
Dwyfor Oils	Permanent loss of 0.15ha land.	Slight Adverse	Moderate – Minor Adverse	Appropriate compensation/ changes to access where applicable.	Slight Adverse	Moderate – Minor Adverse
Morogoro	0.03ha (13%) land would be permanently acquired. This includes subsoil under the half width of the existing road adjacent to the property, which is not included in the overall area of the estate (0.2ha)	Slight Adverse	High	Appropriate compensation/ changes to access where applicable.	Moderate – Minor Adverse	Slight Adverse
Caegwynedd	0.25ha (34.6%) of land would be permanently acquired.	Moderate Adverse	High	Appropriate compensation/ changes to access where applicable.	Major – Moderate Adverse	Moderate Adverse
Cae Phillip	0.06 (2.8%) of land would be permanently acquired.	Slight Adverse	High	Appropriate compensation/ changes to access where applicable.	Moderate – Minor Adverse	Slight Adverse
Tyddyn Bistle	0.36ha (9.7%) of land would be permanently taken.	Slight Adverse	High	Appropriate compensation/ changes to access where applicable.	Moderate – Minor Adverse	Slight Adverse



13.6.2      Loss of land used by the community

As no impacts or mitigation have been identified in relation to loss of land used by the community, the magnitude and significance of impacts are the same as stated in Table 13.4.1 (Neutral-Negligible).

13.6.3      Effects on development land

As no mitigation has been identified in relation to loss of development land the magnitude and significance of impacts are the same as stated in Section 13.4 (Neutral-Negligible).

13.6.4      Residual Environmental Effects (following mitigation) - Operation

*Demolition of private property and associated land take*

Operational impacts following mitigation are the same as those shown in Table 13.6.1 above. Associated land take would be mitigated by providing alternative access and/or financial compensation where applicable.

*Loss of land used by the community*

As no impacts or mitigation have been identified in relation to loss of land used by the community, the magnitude and significance of impacts are the same as stated in Section 13.4. (Neutral-Negligible).

*Effects on development land*

The effect on development land has been identified in relation to the land take at the Cibyn Industrial Estate during the operational phase. The magnitude and significance of impacts are as stated in Section 13.4.3. (Slight Adverse) following compensation and alternative or amended access as mitigation.

**13.7      Summary and Conclusions**

The Scheme would affect a number of private properties through the land loss of gardens and the realignment of accesses to properties. The main impacts on residential land are on Morogoro, Caegwynedd, Cae Phillip and Tyddyn Bistle. Of these, the most significant impact would be on Caegwynedd, which would lose 34.6% of its land. Other impacts are the loss of land and caravans at Glan Gwna Holiday Park, land loss at Dwyfor Oils and at Parciau Solar Farm. Individual negotiations will take place with landowners to establish mitigation where applicable.

The Scheme would not impact on any land designated as 'open access' land under the CRoW Act, or that designated as 'protected open space' or 'protected play area' under the UDP or Deposit JLDP.

No land allocated for housing or infrastructure development under the UDP and Deposit JLDP would be affected by the Scheme. Land designated as development land would be taken on the south-eastern boundary of the Cibyn Industrial Estate, and is designated as a 'Safeguarded Employment Site' under the UDP and

'Employment Site' under the JLDP, however financial compensation mitigation is proposed to address the impact of this.

The Scheme does not acquire any other land designated for development or community use as designated by the UDP or Deposit JLDP.

## **PART 2 – EFFECTS ON AGRICULTURAL LAND**

### **13.8 Effects on agricultural land**

#### **13.9 Introduction**

This section addresses impacts in relation to the effects on agricultural land and businesses associated with the Scheme. It was undertaken in accordance with the methodology within DMRB Volume 11, section 3, Part 6 and follows guidelines outlined in IAN 125/09(W).

##### **13.9.1 Policy context**

In relation to agricultural land, national planning policy on the development of land is set out in Planning Policy Wales Edition 8 (PPWE8) (January 2016)<sup>13.5</sup> and the accompanying Technical Advice Note 6 (TAN 6, 2010)<sup>13.6</sup>.

Paragraph 4.10.1 of ppW advises that land of grades 1, 2 and 3a of the DEFRA system of Agricultural Land Classification (ALC) is the 'best and most versatile' (BMV) and should be conserved as a finite resource for the future. In development management decisions considerable weight should be given to protecting such land from development, because of its special importance. Such land should only be developed if there is an overriding need for the development and either lower grade agricultural land is unavailable or has a recognised environmental value that outweighs the agricultural considerations.

TAN 6 advises on factors to consider when assessing the effects of development on agricultural land (section 6.2) including:

- The effects on farm size and structure;
- The effects on the efficient use of buildings, fixed equipment and capital investment; and
- The effects on drainage, both surface water and land drainage systems.

The UDP contains policy C28 – Safeguarding Agricultural Land, which states that:

*Proposals that will lead to the loss of grade 1, 2 or 3a agricultural land will be refused unless there is an overriding need for the development and it can be demonstrated that:*

- 1. there is no previously developed land available; and*
- 2. there is no land of lower agricultural grades available, other than land that has an environmental value recognised by a landscape, wildlife, historic or archaeological designation which outweighs agricultural considerations.*

It also states however that:

*There may be exceptional cases where the loss of the best and most versatile agricultural land is unavoidable. It is vital however that alternative sites on lower quality agricultural land or non-agricultural land have been firstly considered.*

In the Deposit JLDP, Policy PCYFF1 – Development Criteria, states that:

*....planning permission will be refused where the proposed development would have an unacceptable adverse impact on:*

*13. The best and most versatile agricultural land*

## **13.10 Methodology**

### **13.10.1 Effects on agricultural land**

The assessment has been carried out in accordance with the methodology within the DMRB Volume 11, section 3, Part 6. As per the DMRB and national and local policy, the agricultural assessment covers loss of land and soil resources, the type of land management and farming practices currently operated and the potential impacts on these, and matters such as severance, disturbance and disruption. The assessment covers direct and indirect, secondary, short, medium and long-term, permanent and temporary, beneficial and adverse impacts of the Scheme.

The assessment considers the severity of the impact for two different scenarios:

- (i) Where no mitigation is provided;
- (ii) Where mitigation is provided. Data collection and sources of information used

In terms of land use and ownership, a combination of desk based research, questionnaire surveys and meetings with affected parties have been undertaken. This includes:

- Searches of Land Registry information;
- Issuing of questionnaires to affected parties;
- Meetings held with affected parties.

From this work, a detailed knowledge of land ownership interests affected by the Scheme has been collated.

In relation to the effects on agricultural land and businesses, the assessment work has included:

- (i) A desk-based study of the available published soil, geology and climate data, land quality records and topographic information. This includes:
  - the 1:250,000 Geology Map of Wales (British Geological Society)
  - the 1:50,000 geology sheet for Caernarfon (British Geological Society)

- climatological data for Agricultural Land Classification produced by the Meteorological Office;
  - sheet 2 of the National Soil Map Series; and the semi-detailed map of Anglesey (Soil Survey of England and Wales).
  - Ordnance Survey mapping for the area
  - the Provisional ALC Plan for Wales;
- (ii) From this the likely ALC has been estimated. No site survey of ALC was undertaken;
- (iii) A study of the engineering layout plans and land referencing information;
- (iv) Site visits and interviews with affected farmers, landowners and occupiers mostly during July and August 2015. Detailed notes were taken and farm reports were written up for those holdings experiencing more than minor potential effects.

#### 13.10.2 Assessment criteria

##### *Agricultural land and business*

The process of EIA requires various thresholds to be set to determine the levels of significance of impact. There are no universally recognised definitions of what constitutes “significant”; this will differ according to the perspective of the stakeholder(s). However, for the purposes of this technical assessment, and to assist in its interpretation, common assessment criteria and terminology have been developed for the analysis of predicted impacts.

The assessment criteria for impacts on agricultural soil resources and business as set out below have been agreed previously with the Regional Planning Advisor from the Technical Services Department of the Welsh Government. The criteria are based on the formulaic approach proposed in the revised DMRB guidance HA 205/08<sup>13.4</sup>.

#### 13.10.3 Receptors

##### *Agricultural land resources*

Agricultural land, in particular land of the best and most versatile quality (Grades 1, 2 and 3a), is recognised as being a finite resource of national importance. There are no defined thresholds for assessing the magnitude of the impact, so thresholds have been agreed in consultation with the Welsh Government (as set out in the Environmental Scoping Report, April 2015).

Therefore, in respect of effects on agricultural land, this is a resource of national importance and the thresholds reflect both the quantum and quality of the agricultural land affected.

### *Farm Businesses*

Farm and land-based rural businesses, whether run by owner-occupiers, tenants, licensees or contractors, and whether affected directly or indirectly, are a key receptor. The assessment has considered the physical effects, including land loss, severance, the potential effects on the movement of livestock, field accesses, drainage and the use of farm buildings. It has also considered, taking a long-term view, the potential effects on the medium to long-term ability for the remaining holding to continue in a beneficial agricultural use.

The effect on occupying and neighbouring land-based businesses is a more transient impact to assess. Such businesses vary from year to year, and even from day to day, affected by many external influences such as management wishes and decisions, market prices, illnesses and diseases, the weather and monetary exchange rates.

Whilst the quality and quantity of agricultural land will influence the farming and other land management practices operated over it, the effect on those businesses is assessed as being of local importance, due to their transient nature. That distinction is not intended to denigrate the important role of land managers in providing food for the nation and other opportunities and services.

#### 13.10.4 Criteria

The assessment of impact on land resources has been carried out in three stages. First the magnitude, secondly the importance/sensitivity of the receptor, and thirdly the significance of impact has been considered. These have been determined against the criteria set out in Table 13.10.1 below.

**Table 13.10.1 Agricultural Magnitude of Impact Assessment Criteria**

<b>Impact Magnitude</b>	<b>Definition</b>	
	<b>Impact on Soils</b>	<b>Impact on Local Agriculture</b>
<b>Large Adverse</b>	The proposed development would directly lead to the loss of over 20 hectares of "best and most versatile agricultural land" (Grades 1 / 2 / 3a).	The impact of the development would render a full-time agricultural business non-viable, or would require very significant changes in the day-to-day management of a full-time farm business.
<b>Moderate Adverse</b>	The proposed development would directly lead to the loss of between 5 and 20 hectares of "best and most versatile agricultural land" (Grades 1 / 2 / 3a).	The impact of the development would require significant changes in the day to day management of a full-time agricultural business, or closure of a part-time farm business.
<b>Slight Adverse</b>	The proposed development would directly lead to the loss of less than 5 hectares of "best and most versatile agricultural land" (Grades 1 / 2 / 3a) or the loss of any quantity of non BMV land (Grades 3b, 4 or 5).	Land take would require only minor changes in the day to day management / structure of a full-time agricultural business or land take would result in a significant impact on a part-time business.
<b>Negligible</b>	No direct impact upon agricultural land.	Land take would require only negligible changes to an agricultural business, or minor changes to a part-time farm business.

The methodology for determining the sensitivity of the receptors is set out in Table 13.10.2 below. There are two identified receptors, one of national importance, the loss of which is determined as of high or medium sensitivity, while the second receptor is of local importance and is defined as of medium or low sensitivity. No receptors of very high (international) importance have been identified.

**Table 13.10.2 Agricultural Receptor Sensitivity**

<b>Sensitivity</b>	<b>Examples of Receptors</b>
High	Land Resources are matters of potentially national importance, as identified in the NPPF. The best and most versatile agricultural land (Grades 1, 2 and 3a) is of national importance. There are no defined criteria against which to set thresholds. The effect on land resources is a combination of the quantum and quality of agricultural land affected, relative to both the national resource and the relative availability of land of that quality locally. Land resources of BMV quality should therefore be classified as being of high environmental value (sensitivity).
Medium	Land that is of poorer quality, that of Grades 3b, 4 and 5, is of less sensitivity and is afforded no special protection in the NPPF. It is nevertheless a finite resource and so is regarded of moderate sensitivity. Full-time farm businesses are of medium sensitivity, as the way that farms are operated will vary over time according to ownership and local and international economic factors. Farm businesses are tolerant of some change without detriment to their character.

A combination of the magnitude and sensitivity allows an assessment of the significance of the impact, as defined in Table 13.10.3 below.

**Table 13.10.3 Agricultural Significance of Impact**

<b>Magnitude</b>	<b>Sensitivity</b>		
	<b>High</b>	<b>Medium</b>	<b>Low</b>
Large	Major Adverse	Moderate Adverse	Minor Adverse
Moderate	Moderate Adverse	Minor Adverse	Minor Adverse
Slight	Minor Adverse	Minor Adverse	Minor Adverse
Negligible	Negligible	Negligible	Negligible

#### 13.10.5 Limitations and assumptions

Land quality has been estimated without detailed survey. The potential land quality of the different route options was assessed at Stage 2. The loss of agricultural land cannot be mitigated. Therefore, the exact quality of the agricultural land affected does not need to be verified by survey.

Farm management can change in short periods of time, so whilst the data used was correct at the time of survey (summer 2015), this may change with time. It is assumed that the general farming practices assessed would continue.

### **13.11 Baseline conditions**

In relation to agriculture, baseline conditions can be divided into two categories:

- Inherent conditions such as soils and land quality, which are not influenced to any significant degree by man;
- Land-use conditions, such as farming occupation and management, which are transient

#### **13.11.1 Inherent conditions**

The published 1:50,000 geology sheet 'Sheet 118 & part of 105 Nefyn and part of Caernarfon' shows the majority of the proposed alignment to be underlain by Glacial Till. Unpublished geological maps also suggest the area to be underlain by glacial deposits. Lesser amounts of glaciofluvial deposits are also present.

Glacial Till deposits overlying solid geology consist of a complex combination of both till derived from a stagnant and later on retreating Irish sea ice mass with a north-south direction of movement and prograding ice extending outward from the Snowdonia ice mass. Further details are given in chapter 9.

Soil information is available on the semi-detailed map of Anglesey (SSEW 1970) and shows a variety of soils in drift along the proposed alignment. These comprise mainly medium textured soils with drainage impedence and similar, but freely drained soils in equal proportions. Wet silty alluvium covers the floors of the river flood plains.

The survey describes soil series in the broad particle size class of loam and makes no division into light medium or heavy loam for much of the drift, reflecting the varied nature of the materials upon which the soils are developed.

Climate data (Met Office 1989) used for the purposes of the MAFF ALC (MAFF 1989) for the area shows an annual rainfall of between 930 mm and 1140 mm and there is a direct climate imitation to land quality in all land above about 20 m AOD, limiting the Grade to no better than Grade 2 category. Temperatures are equable as expected on this westerly site in Wales. The field capacity period that the period when soils are potentially wet is between 205 and 221 days.

Provisional mapping (MAFF 1977)<sup>13.3</sup> which is shown in Volume 3, Appendix J.1 broadly indicates land of Grade 3 quality over much of the land adjoining the Menai Straits and Grade 4 quality land to the south. Small patches of Grade 5 land are indicated along strips of alluvium, which cross the area of interest.

Since the provisional map was published there have been a number of changes and current classification (MAFF 1988)<sup>13.4</sup> divides Grades 3 land into 3a and 3b sub-Grades. The MAFF 1988 classification also introduces clear guidelines on the way climate effects land quality, particularly in relation to crop water requirements. It also more clearly states criteria for assessing wetness classes in soil profiles in order to better represent the wetness limitation in the classification.

Climate directly impacts upon land quality and much of the area can be no better quality than Grade 2. In an area of high rainfall, a degree of soil wetness is likely to be the principal limitation to land quality over much of the site. Slightly or seasonally wet



medium or light loamy soils (Wetness Class II or III) will be of good (3a) quality. Soils with heavier textures (heavy clay loam) will be down-graded to 3b (moderate) quality.

Wetter soils affected by ground water in the floodplains remains wet for protracted periods and will be Grade 4 or Grade 5 depending upon the duration of waterlogging.

Gradient in part of the area is moderately steep and results in localised limitations to land quality.

From this we estimate land quality along the proposed alignment to comprise:

- a total of approximately 55.6 hectares of agricultural land out of a total land take of 71.3 ha;
- of this we estimate that potentially about 55 - 60% could comprise land of BMV quality, being mostly subgrade 3a. That potentially means about 30 – 33 ha of BMV land could be affected;
- with about 40 – 45%, or about 22 – 25 ha being poorer quality land as a result of soil depth, wetness or slope.

Approximately a further 48.7 ha would be required for essential licences to undertake construction works and temporary traffic management operations. These areas would be occupied for a period of about 2 years before being returned to their original usage and handed back to the owners.

To construct and maintain engineering and environmental mitigation features such as mammal fencing and drainage features, easements over a further 3.2 ha would be required.

#### *Farm businesses*

The majority of the land along the route of the Scheme is farmed and forms part of privately owned or occupied farm businesses. Twenty-three farm and land-based rural units are directly affected. These comprise a mixture of part-time and full-time farm units and mostly beef and sheep units with little arable land, or blocks of land let to others to farm.

These units are summarised in the following table, described from south to north (approximately).

**Table 13.10.1 Summary of the main farm units affected**

Plot Ref	Farm Unit.	Description
1/6	Ty-Hen Farm, south west of Llanwnda	Ty-Hen Farm extends to approximately 30 hectares. It is centred on two large, modern farm buildings. The land is used for the grazing of cattle, owned or managed by the landowner. Parts of the farm are used for making silage. The land is grazed in winter by sheep on a keep basis.
1/7	Cefn Llwyd Farm	The Scheme affects the edge of one field on the margin of this livestock holding.
1/12, 1/13, 2/1	Geufron Farm, west of Llanwnda	Geufron Farm is mostly a tenanted holding extending to about 34 ha, and which is farmed together with other land in total extending to 121 ha. The farm runs a breeding flock of

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		sheep, grazing or feeding on stubble turnips/swedes. A hay/straw business is operated from the farmyard.
1/14	Henblas	The Scheme affects the edge of one field on the eastern margin of this mixed livestock farm.
2/2	Dinas Farm, Dinas	A dairy farm consisting 100ha of owned land and an additional rented 60ha for grazing and silage. The dairy herd comprises approximately 210 milking cows plus followers, a total of about 360 cattle. Up to about 80 ha of first cut silage is made. The land is grazed in winter by sheep on tack.
3/1	Foryd Farm	The scheme affects the edge of one field on the eastern margin of this holding.
3/4	Cefnwerthyd Farm, Porthmadog	Cefnwerthyd Farm extends to approximately 163 ha, of which approximately 42 ha is at Bontnewydd. The farmers run a 90 cow suckler herd and 500 breeding sheep. The effected parcel is used for making silage and for grazing sheep and cattle. It is currently crossed by the Welsh Highland Railway.
3/7	Llanfair Hall Farm	Block of off-lying grazing land. The Scheme affects the edge of three fields along the northern boundary.
3/8	Hendy	Edge of field of mixed stock farm. The Scheme affects the edge of one field on the eastern edge of this small mixed livestock farm.
4/5	Bronfedw Isaf, Snowdonia National Park	The farm extends to approximately 270 hectares in total, of which approximately 10 ha is affected at Caernarfon. The overall farm operates a breeding herd of cows and a breeding flock of sheep. The land is used for grazing of early-born cattle and sheep, as this land starts growing earlier than the rest of the farm, and silage production.
4/4	Fron Deg	Edge of field of mixed grazing farm. The Scheme affects the edge of one field on the western edge of this small mixed livestock farm.
4/3	Bwlch	Edge of field of mixed grazing farm. The Scheme affects the edge of one field on the western edge of this small mixed livestock farm.
4/6	Glanrafon Bach, near Waunfawr	The affected parcel extends to approximately 8 ha and forms part of a larger agricultural unit, based at Glanrafon Bach on the A4085 towards Waunfawr. The farm supports dairy and beef production. In total approximately 90 ha is farmed, plus summer grazing land locally and on Anglesey. This supports a 140 cow milking herd plus followers. The land at Caernarfon is normally used for silage (5 ha) with 3 ha of rough grazing.
5/3	Tyddyn Bach	The affected land is off-lying from a small mixed stock farm at Tyddyn Bach. The affected land is used for grazing livestock, and has two access points
6/4, 8/1	Pengelli Isaf, near Caernarfon	The farm runs a dairy herd of approximately 125 milking cows plus followers, based at Pengelli Isaf. There is a 250 ewe flock of breeding sheep. The main grazing block adjoins the farm, with part to the north of the local road. There is a separate block of land east of the industrial estate.
7/2	Coed Mawr	The 28 ha parcel forms part of approximately 53 ha of owned land across a number of parcels to the east of Caernarfon. It is known as 'Kent Farm' by the owners. The farm business runs a breeding herd of cattle and 200 breeding ewes. The

		land at Kent Farm is used for summer grazing and silage production, with livestock overwintered at the farm buildings at Coed Mawr.
7/3	Seiont Nurseries, Pontrug	Seiont Nurseries is an established horticultural unit producing a large range of hardy shrubs and perennials for wholesale. Plants are produced under glass and grown-on in polytunnels.
8/4	Tyddyn Hen	Residential small holding with three parcels of grazing land.
8/3	Rhyd y Galen	Small mixed grazing unit.
9/4	Plas Tyrion Farm	A block of off-lying grazing / arable land. The affected land comprises the edge of the block.
9/7	Stables	Recreational small holding used for grazing / keeping horses.
9/8, 9/11	Parciau Farm	Parciau Farm is a mixed holding with grazing sheep, solar panels and farm diversification. The Scheme affects the edge of one field on the periphery of the holding.
9/5	Crug Farm, north east of Caernarfon	Crug Farm operates two main enterprises: a specialist nursery breeding and growing-on of unusual plants, and grazing land. In total this extends to approximately 48 ha. The core nursery extends over approximately 8 ha and is one of very few places licensed as a quarantine centre for imported plants. The grassland is let to a neighbour for grazing of sheep and cattle.

## 13.12 Predicted Environmental Effects

### 13.12.1 Construction

#### *Agriculture*

Many agricultural impacts would commence at the start of the construction phase and would continue throughout the operational phase (for example land loss, severance). They are thus described below under construction phase impacts.

#### *Agricultural land resources*

The effects on agricultural land resources transcend both construction and operational phases. The Scheme would require the permanent acquisition of approximately 55.6 hectares. The exact proportion of each grade is not known, but is estimated as follows. The effect is the permanent loss of the land to agricultural or land-based enterprises as a result of the construction. Given the quantum of land of potentially BMV quality affected the magnitude of impact would be large adverse, and the sensitivity high, leading to an effect of Major Adverse significance:

**Table 13.11.1: Predicted Agricultural Land Loss by ALC Grade**

Predicted Grade	Predicted Area (ha)	Predicted Proportion (%)
2 and 3a	30 - 33	55 – 60
3b and 4	22 - 25	40 – 45
Total	55.6	100

### *Temporary Land Take*

construction period (48.7 ha plus easements over a further 3.24 ha for environmental mitigation works). Of this approximately 36.6ha is farmed by the following holdings, as shown below. These areas of land would be returned to the affected land holdings at the end of the construction phase. The effects are therefore limited to the loss of the use of the land for agricultural and land-based enterprises for the duration of the construction period, and so do not add significantly to the adverse effect on the long-term land resource. It is considered that no farms or farming enterprises will be so significantly affected by the additional temporary land take that enterprises will need to be closed. There will be additional costs, such as the purchase of supplementary fodder or renting of additional grazing or forage land, but those will be matters for compensation.

The temporary land take by holding is indicated below approximately.

**Table 13.12.2: Approximate Temporary Land-take by Holding**

<b>Plot Ref</b>	<b>Farm Unit.</b>	<b>Temporary Land Take (rounded to nearest 0.1ha)</b>
1/6	Ty-Hen Farm, south west of Llanwnda	1.3
1/7	Cefn Llwyd Farm	<0.1
1/12, 1/13, 2/1	Geufron Farm, west of Llanwnda	1.7
1/14	Henblas	0.5
2/2	Dinas Farm, Dinas	5.4
2/3, 3/1	Foryd Farm	0.5
3/4	Cefnwerthyd Farm, Porthmadog	2.6
3/7	Llanfair Hall Farm	0.7
3/8	Hendy	1.6
4/5	Bronfedw Isaf, Snowdonia National Park	1.6
4/4	Fron Deg	0.1
4/3	Bwlch	0.6
4/6	Glanrafon Bach, near Waunfawr	1.9
5/3	Tyddyn Bach	0.2
6/4, 8/1	Pengelli Isaf, near Caernarfon	6.2
7/2	Coed Mawr	0.9
7/3	Seiont Nurseries, Pontrug	<0.2
8/4	Tyddyn Hen	1.1
8/3	Rhyd y Galen	0.2
9/4	Plas Tyrion Farm	0.2
9/7	Stables	0.5
9/8, 9/11	Parciau Farm	0.5
9/5	Crug Farm, north east of Caernarfon	8.0

#### *Severance during Construction*

Short-term severance accesses into farmland during construction could, without mitigation, cause significant short-term impacts on holdings 1/6, 2/1, 2/2, 4/5, 4/6, 5/3, 6/4, 7/2, 8/1 and 9/5. The effect would potentially be, without mitigation, that larger areas of land would not be accessible and would therefore not be capable of beneficial use until such time as the alternative accesses proposed as part of the long-term mitigation, have been provided.

#### *Crop Loss and Timing*

None of the land was in arable use, but parts of the land were used for producing silage. The loss of areas planned for winter forage production could affect the ability to overwinter livestock, although alternative feed sources are normally available. Additional costs as a consequence would be a matter for compensation.

#### *Loss of Buildings*

No agricultural buildings would be lost as a result of the Scheme.

#### *Disease Transmission*

There is the potential, without good practice, for plant diseases and weeds to be spread between holdings. There is a limited risk of the spread of animal diseases even without mitigation, however.

#### *Field Drainage*

There is a limited amount of under-field drainage known about in the area. During construction there is the potential for this to be severed or damaged, as well as the potential for effects on old drainage schemes that are not recorded or known in detail. Without mitigation (ie repair) the consequence of damage to drainage schemes could be poorer drainage of land in the wider area.

#### *Water Provision*

The provision of water to fields being used for grazing animals could be affected during construction. Without mitigation the effects could reduce the potential to graze affected areas.

#### *Noise and Dust*

Without mitigation, there could be impacts from noise (e.g. during construction) or from dust, although no particularly-sensitive neighbouring agricultural land uses have been identified.

### 13.12.2 Operational

#### *Agriculture*

The impacts on agricultural land and businesses are experienced during the construction phase. Those effects have been described in the construction phase, and include:

- (i) Land quality and take: this is the impact on the national agricultural resource of the loss of farmland in policy terms. This is of major adverse significance, based on the quantum of BMV land affected.
- (ii) Land take and severance by farm: the impact on individual farm holdings due to permanent land take continues through construction to the operational phase. Without mitigation a significant impact, defined as requiring major changes to the operation of a full-time farm business, would occur on 10 farms as listed above, with a lesser impact on a further 13 agricultural holdings. The principal impact is due to severance as the proposed scheme divides land holdings or farmed blocks of land.
- (iii) Drainage: long term impacts on land where drainage may be affected would continue, without mitigation, through the operational phase.
- (iv) Water supplies: water from natural sources of mains/private farm supplies affected at the construction phase would continue to be an impact at operational phase, unless mitigated.
- (v) There may be impacts from operational noise, but purely in respect of the agricultural enterprises, no especially noise-sensitive land uses have been identified.

### **13.13 Proposed mitigation**

#### **13.13.1 Construction mitigation**

##### *Agricultural land take*

The Scheme involves the permanent land take of the minimum amount of land necessary. Wherever possible land required in addition for construction, for example the site compounds or areas identified for re-grading would be returned to an agricultural use and quality comparable to that which existed before the Scheme.

##### *Severance during construction*

Severance can be mitigated in places by the provision of underbridges or overbridges or new temporary and permanent accesses. These would be incorporated into the Scheme to reduce severance effects on the following units:

- (i) **Geufon Farm** would be provided with access to the severed land from the lane to the south;
- (ii) **Dinas Farm** would be provided with an underpass and realigned access track to enable access to the severed land. There would also be height under the viaduct for passage by animals and some vehicles;
- (iii) **Cefnwerthyd Farm** would be provided with animal access under the viaduct, plus access under the Scheme adjacent to the railway;
- (iv) **Pengelli Isaf** would be provided with access to severed land east of the industrial estate. On the main holding, an underpass would be provided together with a new farm track to enable dairy cows and cattle to access land otherwise severed by the proposed Scheme.

Other smaller parcels of land that are affected by severance during construction will, so far as possible, be provided with continued access arrangements throughout the construction period.

#### *Crop Loss and Timing impacts*

The effects can be reduced by giving advance warning to enable farmers to plan ahead for the year. The timing of entry so as to delay entering a few weeks before a field is to be cut for silage and entering straight after harvest, for example, would minimise the localised impacts. However this may not be possible. Any consequent losses would be matters for compensation.

#### *Disease Transmission*

Care to avoid spreading soil and materials between different farms when the fencing is being erected at the start of the entry process, would minimise the limited risk of spreading diseases. Once the route has been fenced there should be limited opportunity for contact with animals and accordingly limited risk for disease transmission. Care would need to be taken with any crossing points used by livestock during the construction process.

#### *Field Drainage*

Parts of the route are understood to have the benefit of historic under-field drainage systems in place, but the details are not, in many cases, known due to their age. Care would be taken to identify any drainage schemes affected and to provide collection or header pipes so that these schemes can continue to work effectively under the surrounding land both during the construction and operational phases. The drainage of surrounding land would be monitored and if drainage conditions are noted to have altered, remedial works would be carried out.

#### *Water Provision*

Water supplies would be maintained wherever possible. During construction it may be that water supplies to some areas would be severed, and in those circumstances the owners would be compensated to provide either temporary or permanent water supplies.

#### *Noise and Dust*

Noise and dust generation would be kept to a minimum and within acceptable working limits, as described in Chapters 5 and 11 of this ES.

### 13.13.2 Operational Mitigation

#### *Agricultural Land Loss and Severance*

Land loss cannot be mitigated. The Scheme requires land for construction, and the design would take the minimum necessary to construct and operate the Scheme.

Severance impacts have been mitigated where possible and feasible. In many cases a balance has been struck between mitigation and design/cost. Mitigation considerations for each holding affected by severance are summarised in the table below.



**Table 13.12.1: Mitigation Considerations and Provisions**

<b>No</b>	<b>Farm Unit</b>	<b>Considerations and Provisions</b>
1/6	Ty-Hen Farm	Ty-Hen Farm is severed by the Scheme. As a consequence, access to the severed land will need to take place by road. This will add to the costs and time, and will reduce grazing flexibility. Some cattle are, however, already transported to the holding by road. This is a part-time unit and the additional time and costs will not prevent the land continuing to be farmed. The effect would be mitigated by the provision of a new PMA between the main holding and the local lane, reducing the distance to access the severed land considerably.
1/12, 1/13, 2/1	Geufron Farm	The Scheme crosses the farm on a low embankment. Access to the severed land will be provided from a track alongside the Scheme connecting to the public road. This will necessitate transporting livestock and occasionally feed by road, which will add to costs and time but will not prohibit continued farming of the land.
2/2	Dinas Farm	The severance effects are mitigated by the provision of an underpass for all vehicles. This will enable the severed land to be connected. There is also height beneath the viaduct for cattle and smaller vehicles to pass, such that the use of that land is also not significantly adversely affected.
3/4	Cefnwerthyd Farm	Access for cattle between the severed parts of the southern block will be possible below the viaduct adjacent to the river. Access to all resultant parcels at the Welsh Highland Railway crossing will be provided, albeit two crossings (instead of one) of the railway may on occasion be necessary adding to management time.
4/6	Glanrafon Bach	Access to all parcels would be provided. Livestock is already transported to these parcels from the main holding. The smaller size of fields resulting would be of limited use for silage production, but grazing can continue.
5/3	Tyddyn Bach	The Scheme severs the parcel of land, but access to both consequent blocks would be available, from an existing access point or from a new access track proposed.
6/4, 8/1	Pengelli Isaf	<p>The parcel of land adjacent to the Cibyn industrial estate will continue to be accessible. The remaining thin strip of land adjacent to the industrial estate will be accessible as now, via that estate. The eastern land will be accessible from a new PMA from the road to the east.</p> <p>Severance of the main grazing block adjoining the buildings at Pengelli Isaf has been mitigated by the provision of a cattle/quad underpass and a concrete PMA linking to the fields. This will enable cows and livestock to access all the main block of grazing land currently accessible without crossing the road. Vehicular access to the severed land will have to take place via use of the public road, which will add time and costs.</p>

		Currently access to the north eastern block of grazing land necessitates crossing the local road. There would be a similar arrangement post construction, with a new crossing point over the local road. This will replicate the current arrangement.
9/5	Crug Nurseries	Land is owned between Crug Farm and the A487. This block is accessible from the south and north, with a very steep slope severely limiting tractor travel in the middle. The lower parcel would be accessible from an existing gateway off the public highway.
7/2	Coed Mawr	This farm accesses land at present from a gateway in the south. This will be lost to the proposed scheme. Alternative access is available from the land to the north, but that is very narrow and overgrown. As a result agricultural use of the parcel of land will be reduced.

### **13.14 Residual Environmental Effects (following mitigation)**

#### **13.14.1 Construction impacts**

##### *Agricultural Land Resources*

Some 55.6 ha of agricultural land would be required by the Scheme, plus a further 48.7 ha temporarily during construction, of . This comprises a mixture of land quality, comprising a mixture of land from Grade 2 to Grade 4.

The land affected temporarily during construction would not be lost. However, some 55.6 ha would be lost, of which of the order of 30 ha is predicted to be potentially of BMV quality. This represents a major adverse impact.

##### *Farm and Land-based Businesses*

This assessment considers the cumulative impact of the construction phase impacts, as set out above, on the farm businesses affected. It assesses the impact after the mitigation embedded into the Scheme, including physical works (e.g. underpasses) and good management practices described above.

The magnitude of the post-mitigation impacts is assessed in the table below, and is ascribed a magnitude against the criteria in Table 13.9.1 above. Land take figures

**Table 13.13.1 Agricultural Magnitude of Post-Mitigation Impacts**

No	Farm Unit	Magnitude of Impact (post mitigation)
1/6	Ty-Hen Farm	This part-time farm would lose approximately 2.4 ha, or about 8%, of the farm area. The farm will experience severance, and that will result in greater time spent transporting and checking cattle and sheep. This has been considerably reduced by a PMA. Collectively these effects will require significant changes in the day to day management of the part-time farm. Overall this would be an impact of slight adverse magnitude (given the part-time nature of the holding) of low sensitivity, resulting in an effect of minor adverse significance.
1/7	Cefn Llwyd Farm	The Scheme would affect approximately 0.7 ha on the corner of a grassland field. This will not cause severance. The effect is of slight magnitude and minor significance.
1/12, 1/13, 2/1	Geufron Farm	This full-time farm will lose of the order of 3.6 ha. There will be severance but the severed land will be accessible. Overall the effect will be a very significant change in the day-to-day management, being a large adverse magnitude impact of medium sensitivity, resulting in a moderate adverse effect.
1/14	Henblas	The farm will lose approximately 1.1 ha, of the farm. This comprises the edge of one field. This is of minor adverse significance.
2/2	Dinas Farm	Dinas Farm will lose of the order of 3.0 ha or 3% of the owned land. This represents, in isolation, a relatively minor effect although proportionately more significant as the affected land is grazing land accessible to dairy cows. The land is also severed although the provision of an underpass and access beneath the viaduct will mean that overall severance would not have a significant limitation on use. Due to the nature of the farm, where movement between buildings and land for grazing cows is both frequent and critical, the farm will experience a very significant impact on day-to-day activities. Overall the combined effect is of large magnitude of medium sensitivity, being a very significant impact on day-to-day farming of a full-time farm business, resulting in an effect of moderate adverse significance.
2/3, 3/1	Foryd Farm	This holding loses an area (0.5 ha) of field edge, an effect of minor adverse significance.
3/4	Cefnwerthyd Farm	The holding would lose approximately 2.3ha of the land at Bontnewydd, which of itself would have a proportional effect on stocking potential. The block of land forms part of a much larger farm. This particular parcel of land is also affected by severance, plus the closure to vehicular traffic of the local road, and post-construction will be considerably more time-consuming to the farm.

		Combined with the effects of severance, the farm will be require very significant changes in day-to-day management, being a large adverse magnitude impact of medium sensitivity and overall of moderate adverse significance.
3/7	Llanfair Hall Farm	The holding would lose 3.1 ha along the periphery of the farm. This is a substantial area of land but it forms the northern boundary of the holding and causes not severance or disruptions to farming activities. As a consequence it is a significant change in farming activities being a moderate adverse magnitude impact of medium sensitivity, and hence leading to an adverse effect overall of minor adverse significance.
3/8	Hendy	The holding would lose 0.4 ha of field edge of the holding at Hendy. This is all peripheral land. The overall effect is of minor adverse significance.
4/5	Bronfedw Isaf	The full-time holding will lose approximately 3.4 ha of land directly to the Scheme. Some of the severed land will be of limited use for agriculture, given the small size and shape of the resultant parcels, making them difficult to be farmed practically. The overall effect will be the loss of some early grazing land, land loss and severance and hence will be more important than straight percentages suggest. Overall a large adverse effect of medium sensitivity and an overall moderate adverse significance
4/4	Frondeg	The Scheme involves the loss of 1.3 ha on the edge of this holding, and is of minor adverse significance.
4/3	Bwlch	The Scheme involves the loss of only 0.3 ha on the edge of this holding, and is of minor adverse significance.
4/6	Glanrafon Bach	The land loss from this parcel of land would be 2.8 ha. Additionally, the proposed scheme will sever most fields. The affected block of land is off-lying grazing and consequently of limited utility at present. Its utility will be significantly further reduced by both land loss and severance. The overall effect will be of large adverse magnitude and overall of moderate significance.
5/3	Tyddyn Bach	This block of grazing land would lose approximately 1.6 ha and be severed by the proposed scheme. Access to both severed parcels would be possible post construction. The effect overall would be of moderate adverse magnitude and minor significance, although farming the affected parcel of land would be more time consuming due to the need to transport stock between severed parcels.
6/4, 8/1	Pengelli Isaf	This substantial dairy farm would experience land loss and severance. The land loss between the two affected parcels, Pengelli Isaf (5.1 ha) and land by the industrial estate (1.0), is considerable. Due to the size of the farm, some 113 ha, the loss of 6.1 ha represents 5.4% of farmed land, of itself considerable but not likely to

		prejudice viability. Accordingly, land loss would not, of itself have a significant adverse effect. However as most of this island accessible to the grazing cows it would limit future expansion potential. The severance has been partly mitigated by the provision of a cattle underpass. There will be a longer walking route for some cattle to reach grazing land, with consequent time and cost implications. It would still be necessary to cross the re-aligned local road at grade, which requires several workers. There is the potential for land funnelling into the realigned cattle access route to become poached. The overall effect will vary considerably alter the day to day farming operations of the holding. Overall the effect is of large adverse magnitude and medium sensitivity. This would result in a moderate adverse significance.
7/2	Coed Mawr	The land loss from this 28 ha parcel of land would amount to 3.5ha, or 13%, and overall approximately 7% of the holding. The proposed alignment results in severance of a small parcel of land to the east. Overall land loss would not be significant. However, the proposed scheme would result in the loss of the main access point, with subsidiary access being limited due to road alignment and overhanging vegetation. The effect is considered to be very significant and have large adverse magnitude and overall of moderate adverse significance.
7/3	Seiont Nurseries	The land loss would be limited (<0.2 ha) and not significant. However, the nursery relies upon a shelter belt of trees as a wind break. The scheme would minimise losses so far as possible, and replant to replace any trees lost. Moderate magnitude of medium sensitivity means minor adverse significance.
8/4	Tyddyn Hen	This residential small holding would lose 1.4ha. Overall this would considerably disrupt current farming practices but as this is a small holding the effect is of slight magnitude and minor significance.
8/3	Rhyd y Galen	The land loss from this field would have an impact of minor adverse significance.
9/4	Plas Tyrion Farm	The land loss from this field would have an impact of minor adverse significance.
9/7	Stables	The loss of land from the corner of one field would have an effect of minor adverse significance on this non-farmed holding.
9/8, 9/11	Parciau Farm	The farm would lose a small amount of land from the corner of one field and thus of negligible impact and significance.
9/5	Crug Farm	The effect on the plant nursery in terms of land loss, is minor. The importance of shelter belt vegetation is recognised and will be minimised by careful construction methodology. The effect of land loss on the agricultural land, some 7.9 ha, coupled with severance would have a

		significant disruption to the working of that land. Whilst the land is let for grazing, access to parts of the severed land would be hindered by steep topography. The overall effect would be a very significant (large adverse) disruption to day to day management, but due to medium sensitivity the effect would be of moderate adverse significance.
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**13.14.2 Operational impacts - Agriculture**

No agricultural enterprises would be significantly affected by operational impacts that have not been described above.

**13.15 Summary and Conclusions**

The proposed alignment would affect a number of farms and agricultural holdings. The majority of these are either off-lying holdings or smaller farms/holdings, and as a consequence the significance of the impact is generally minor. A number of larger, full-time holdings would be affected including two large dairy units. Mitigation has been incorporated to reduce the effects of severance, but overall there would inevitably be significant disruption to day to day management. However, no farm businesses would be terminated. Farms of a full-time or part-time nature are of medium or low sensitivity and as a consequence all effects are of no higher than moderate adverse significance for all affected holdings.

Of the 23 holdings (one of which is not agricultural), none will be terminated. Eight will experience very significant changes, an effect of moderate overall significance given the medium sensitivity of full-time farms as receptors. Fifteen will experience minor effects, being minor or significant effects on full-time time businesses, or minor to significant effects on part-time farm business.

The land loss is estimated at about 55.6 ha. Of this it is predicted that 30 ha would potentially be likely to be of best and most versatile agricultural quality, resulting in an adverse effect of major magnitude and significance. The loss of land cannot be further mitigated, nor would any alternative route be expected to result in a different overall significance of impact.





- Protected Open Spaces and Play Areas
- Housing Allocation Without Planning Permission
- Employment Site
- Housing Allocation With Planning Permission

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## A487 CAERNARFON AND BONTNEWYDD BYPASS

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Sheet 1 of 4

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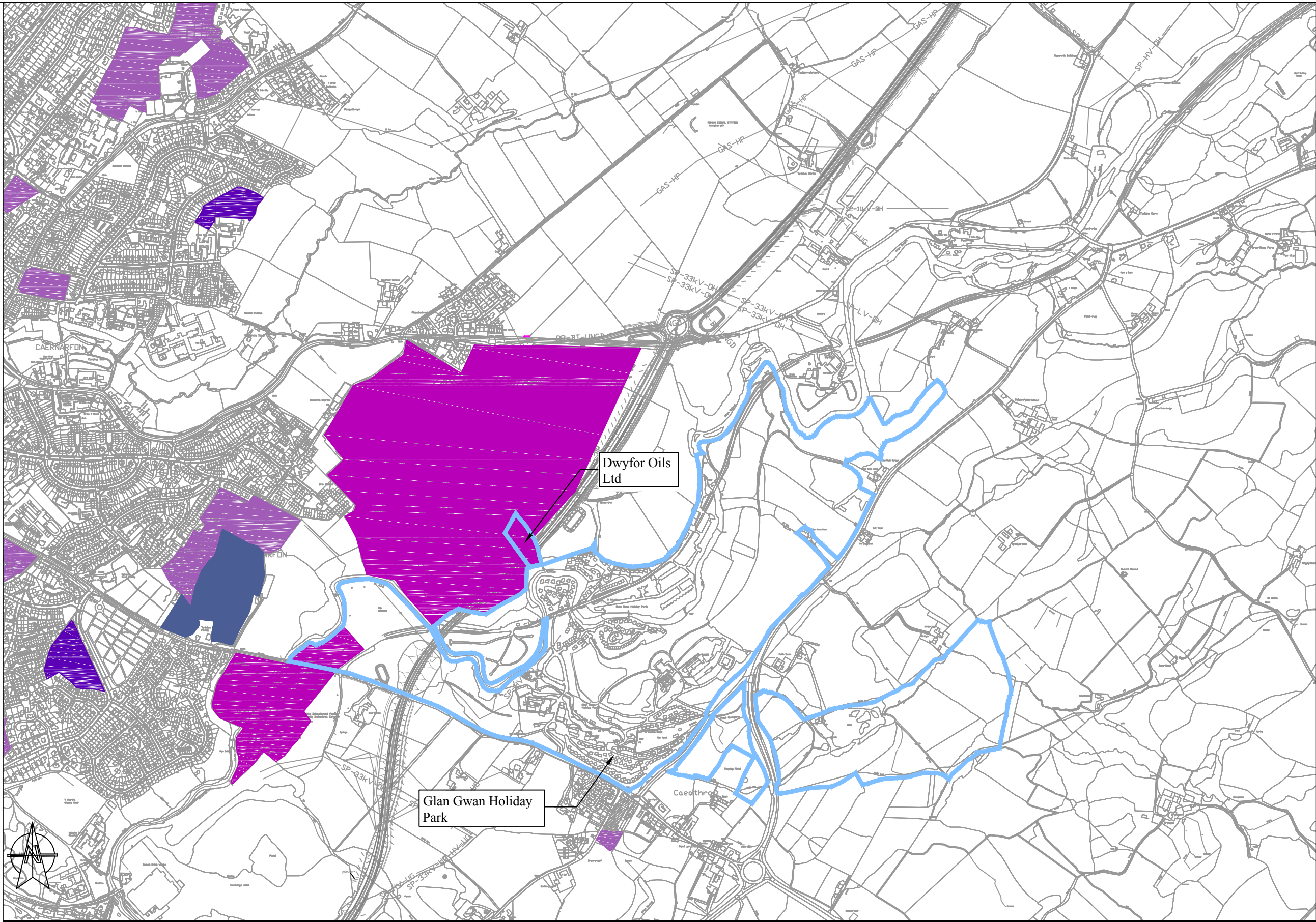
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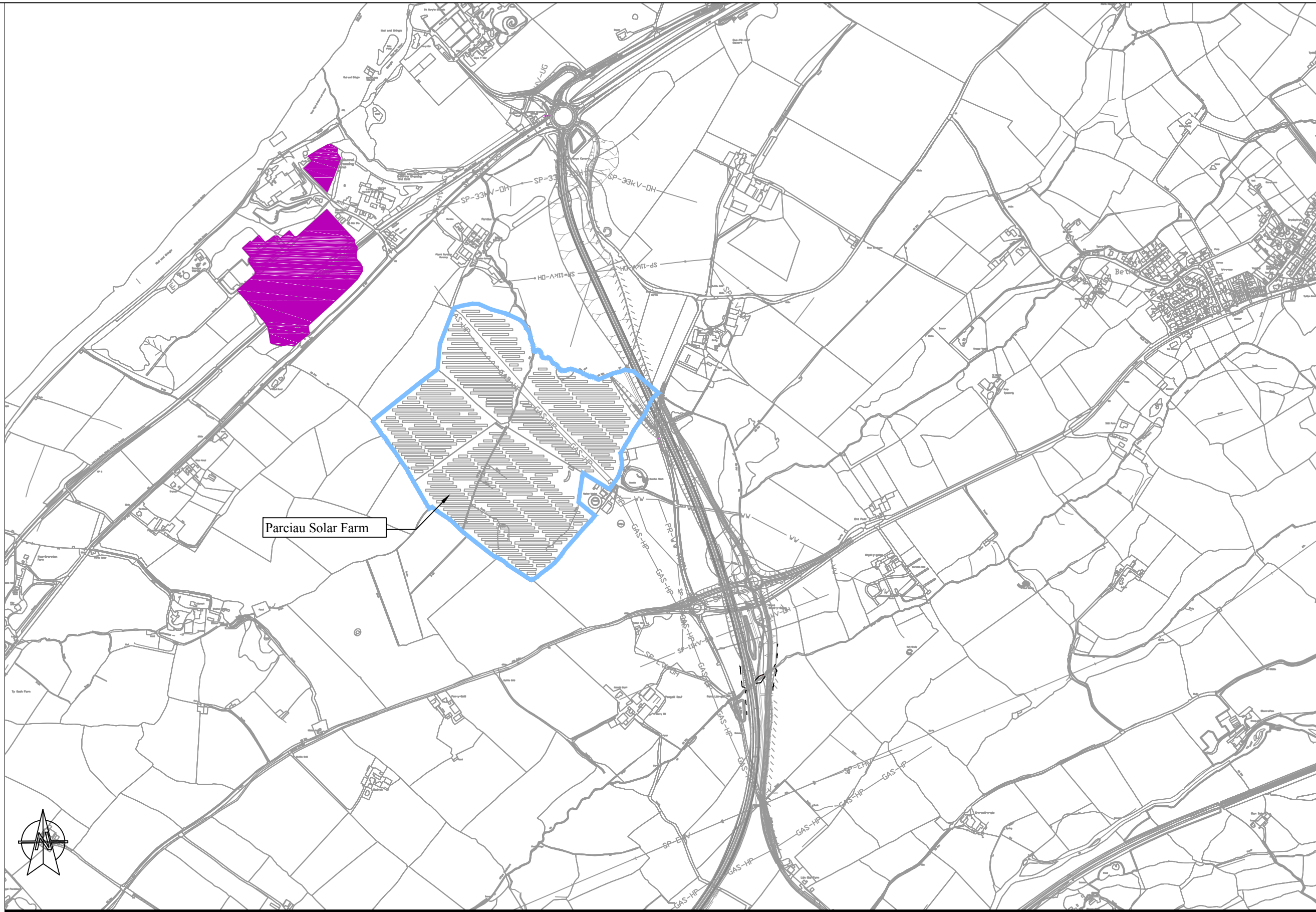
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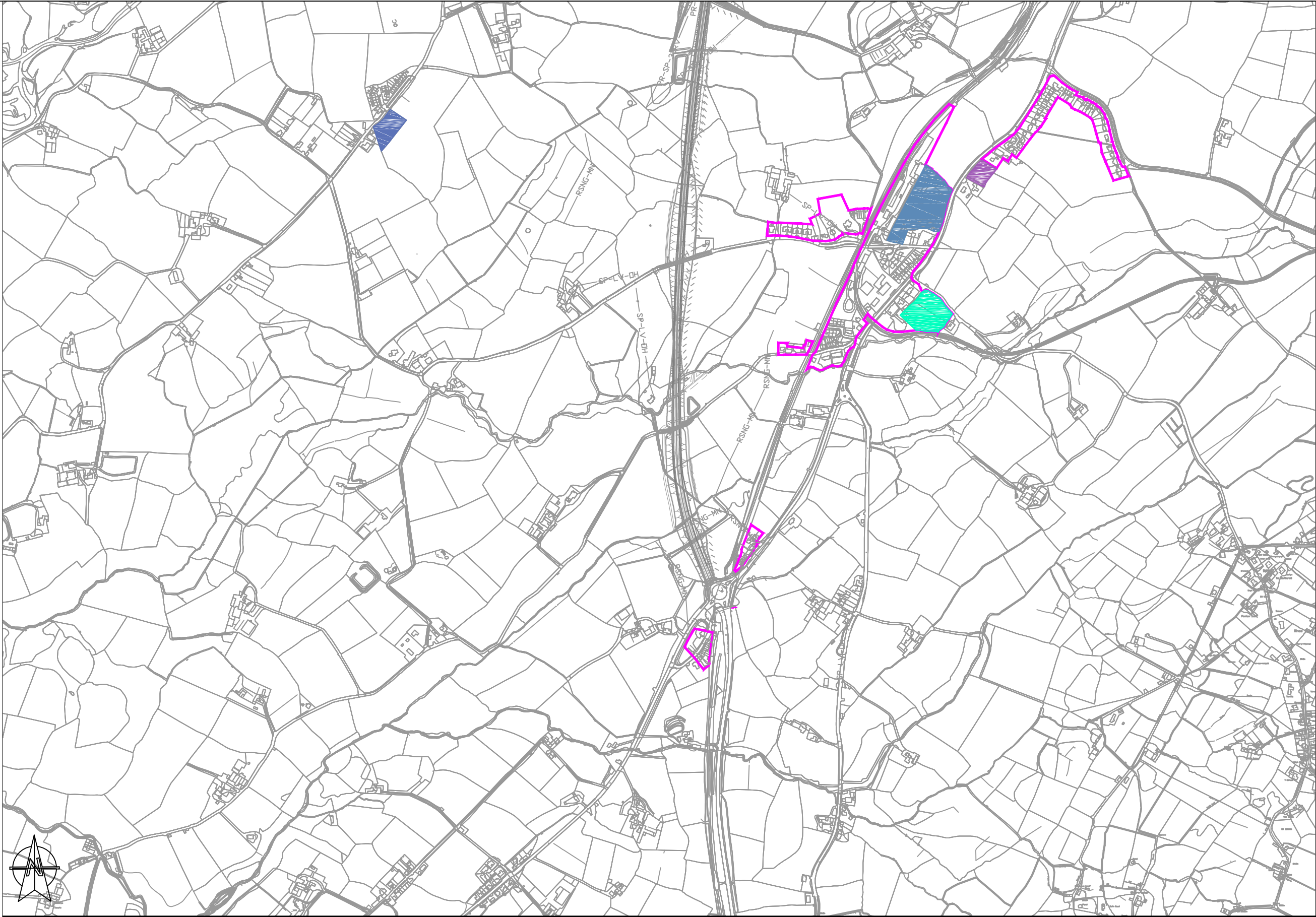


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- Housing
- Housing Phased
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Community & Private Assets  
Impacts on Private Property, Land Used by  
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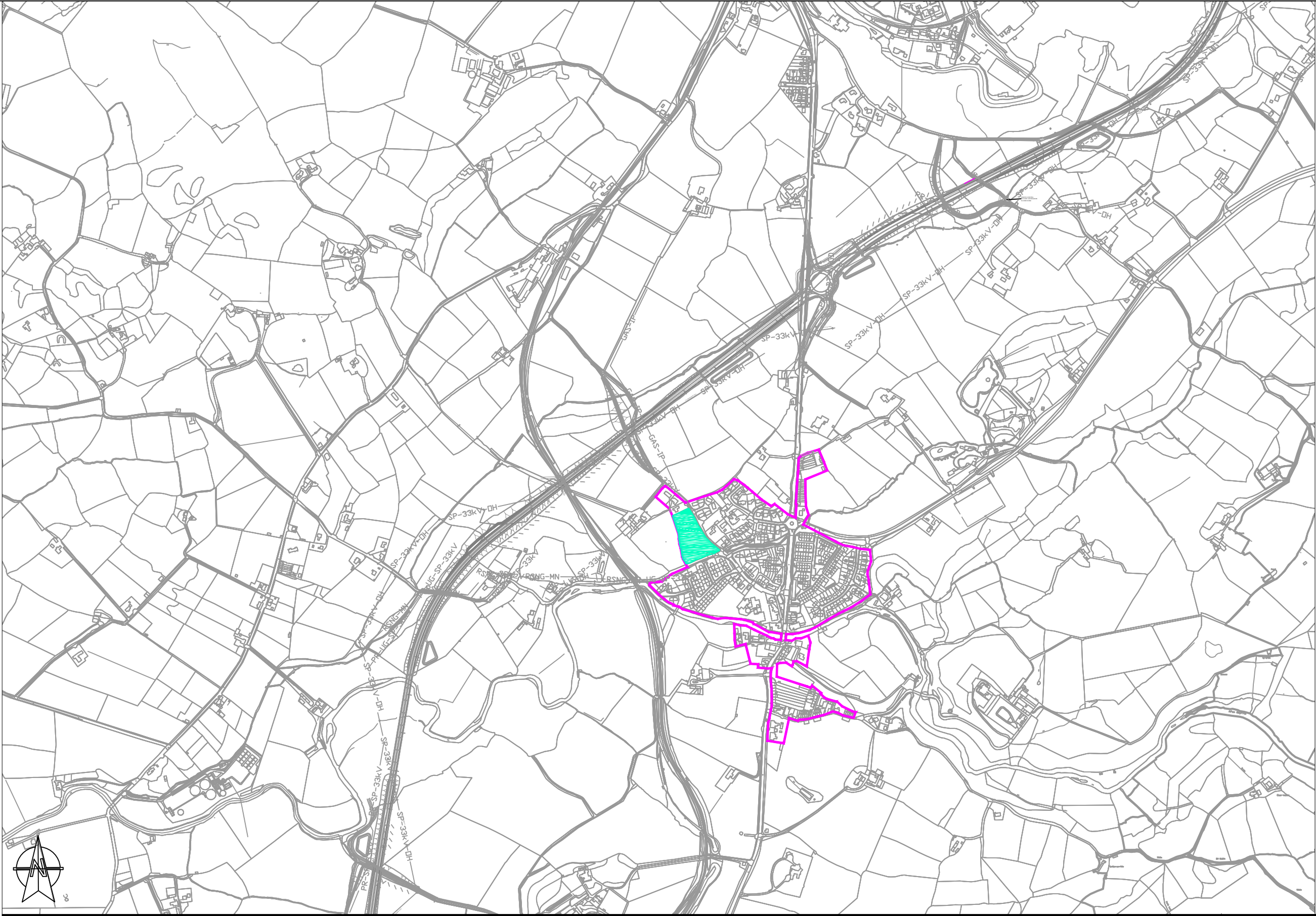
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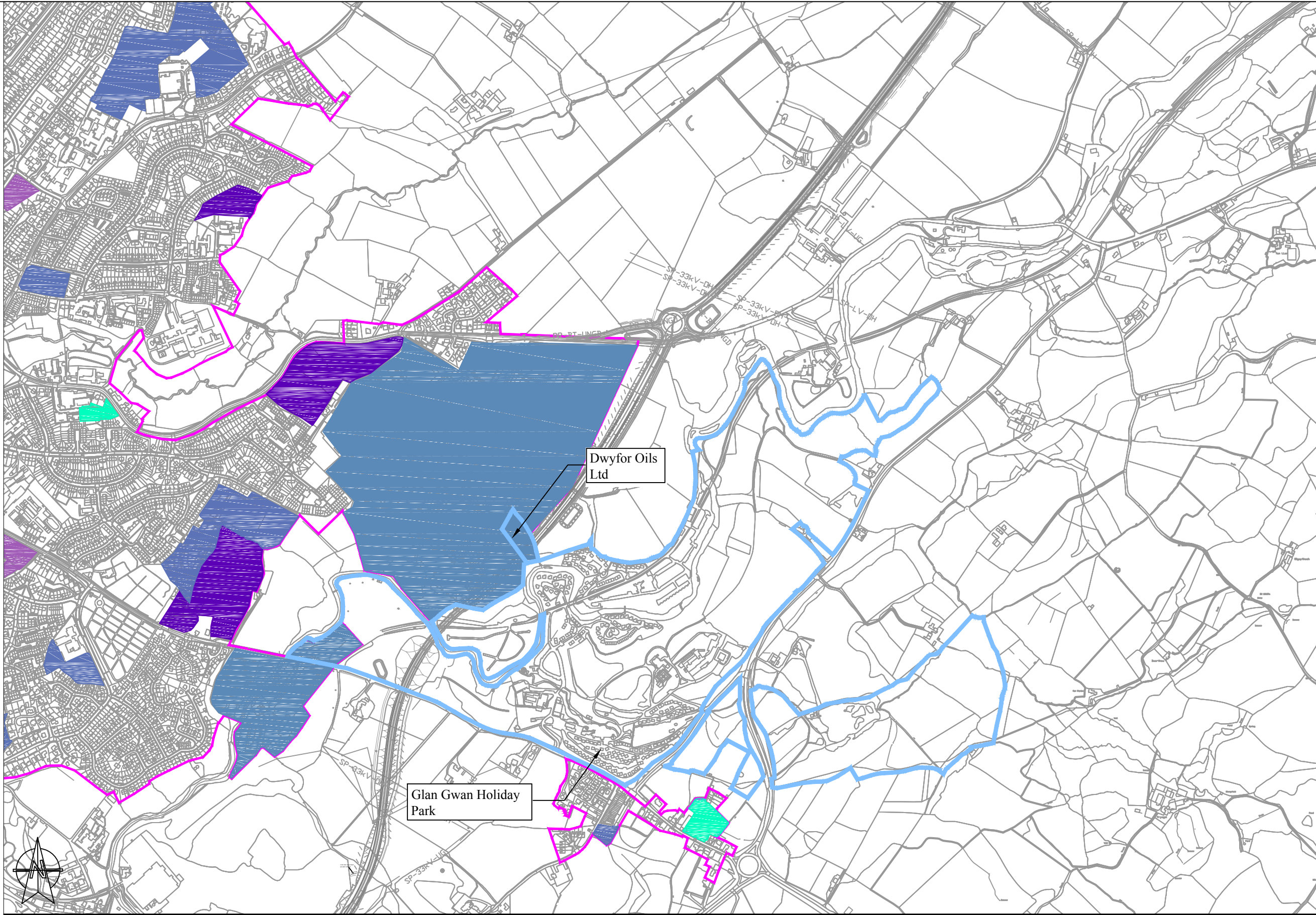


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- Housing
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- Protected Play Area
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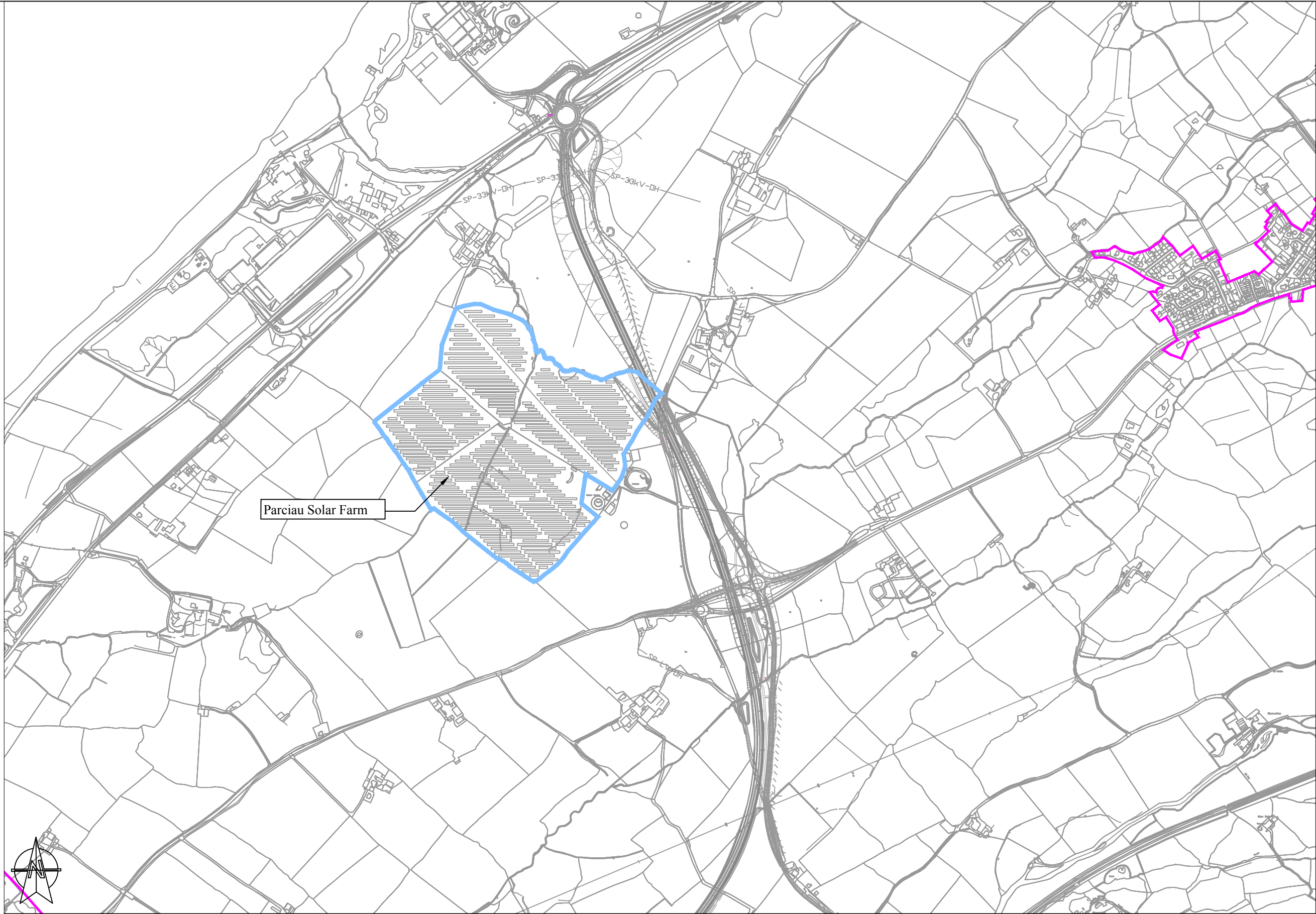


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