

Land adjacent to Llantwit Major Bypass, Boverton

Ecology Update Note

edp3775_r005a_221117

1. Introduction

- 1.1 This Ecology Update Note has been prepared by The Environmental Dimension Partnership Ltd (EDP) on behalf of Barratt Homes, South Wales (hereafter referred to as 'the Client') in relation Phase 2 of proposed residential development of land adjacent to Llantwit Major Bypass, Boverton (hereafter referred to as 'the Application Site').
- 1.2 EDP is an independent environmental planning consultancy with offices in Cirencester, Cardiff and Shrewsbury. The practice provides advice to private and public sector clients throughout the UK in the fields of landscape, ecology, archaeology, cultural heritage, arboriculture, rights of way and masterplanning. Details of the practice can be obtained at our website www.edp-uk.co.uk.

2. Background and Scope

- 2.1 A Preliminary Ecological Appraisal of the Application Site and subsequent detailed surveys with respect to reptiles and dormouse (*Muscardinus avellanarius*) were previously undertaken by Thomson Ecology during 2015 to inform a planning submission for its proposed residential development. This was further to ecological surveys of adjacent land to the north west (Phase 1) for which an application for full planning permission was submitted to Vale of Glamorgan Council (VoGC) on 22 August 2014 (application reference 2014/00995/FUL) for the development of 66 residential dwellings, public open space, landscaping, highways improvements and associated engineering works on agricultural land.
- 2.2 Following submission of a planning application for Phase 1 of proposed residential development, planning consent is now sought to deliver Phase 2 of the proposed development scheme (**Annex EDP 1**). Given the time that has elapsed since the Application Site was last surveyed, an update assessment is considered necessary to determine whether any material changes have arisen during the interim period, with respect to the distribution and management of habitats on site and their potential to support protected species.
- 2.3 This Ecology Update Note details the findings of the update baseline investigations completed during September 2017 and assesses the current ecological status of the Application Site necessary to determine any additional potential ecological constraints to its proposed development.

Site Context

- 2.4 The Application Site is centred approximately at Ordnance Survey Grid Reference (OSGR) SS 988 684 in the local planning authority of VoGC. The Application Site measures approximately 0.56 hectares (ha) and is located to the immediate east of Boverton and west of the Ministry of Defence (MoD) site at St. Athan, approximately 2km inland from the south Wales coastline. Beyond the built-up areas of Boverton and MoD Saint Athan, the wider landscape is otherwise dominated by agricultural land.
- 2.5 The Application Site is bound on three sides by transport links, including Llantwit Major Bypass (B4265) along its south-western edge, the Vale of Glamorgan railway line along its north-eastern edge, and Llantwit Road defining the south-eastern boundaries of the Application Site. Agricultural fields associated with Phase 1 development site delineates the north-western boundary. The Application Site predominantly comprises poor semi-improved grassland, delineated native species-poor hedgerows. Additionally, an established belt of broadleaved woodland aligns the railway line forming the north-eastern boundary, whilst the south-western boundary is defined by highways planting aligning Llantwit Bypass and supporting relatively young and semi-mature tree standards.
- 2.6 The principal ecological features within the Application Site (identified through the update site survey) are illustrated on **Plan EDP 1**.

3. Methodology

Update Desk Study

- 3.1 The desk study is an important element of undertaking an initial ecological review of a site proposed for development, enabling the initial collation and review of contextual information, such as designated sites, together with known records of protected and priority species.
- 3.2 The original desk study was conducted by Thomson Ecology on 15 April 2015. Given how recently this desk study was undertaken the results are still considered to provide an accurate representation of the Application Site and surrounding habitats and thus remains relevant to the development proposals discussed herein. Thus, the desk study collated by Thomson Ecology (pertaining to species records and non-statutory local sites) has been summarised within **Section 4** of this report. An update desk study with respect to statutory designated sites was, however, undertaken by EDP on 1 November 2017 and included obtaining information on the following:
- International statutory designations (within a 10km radius around site);
 - National statutory designations and non-statutory local sites (2km radius);

- 3.3 The above search areas are considered sufficient to cover the potential zones of influence¹ of the proposed development in relation to designated sites, habitats and species.

Update Extended Phase 1 Survey

- 3.4 The survey technique adopted for the initial habitat assessment was at a level intermediate between a standard Phase 1 survey technique², based on habitat mapping and description, and a Phase 2 survey, based on detailed habitat and species surveys. The survey technique is commonly known as an Extended Phase 1 survey. This level of survey does not aim to compile a complete floral and faunal inventory for the Application Site.
- 3.5 The level of survey involves identifying and mapping the principal habitat types and identifying the dominant plant species present therein. Additionally, any actual or potential protected species or species of Principal Importance³ are identified and scoped.
- 3.6 The Extended Phase 1 survey was undertaken by a suitably experienced surveyor on 6 September 2017, during which the weather was 16°C, dry with 100% cloud cover and no wind.

Limitations

- 3.7 September is within the optimal period for undertaking an Extended Phase 1 Survey. As such, the survey is not considered to have been limited by climatic or seasonal factors.

Detailed (Phase 2) Surveys

- 3.8 In addition to an Extended Phase 1 survey, further detailed assessments were undertaken in relation to bats and badger to update the existing baseline and further inform potential ecological constraints in relation to future development of the Application Site, as detailed further below.

Bats

Investigations of Bat Roosting – Trees

- 3.9 To determine the potential impacts of the proposed development upon bats potentially roosting within trees across the Application Site, all suitable standards were subject to an update ground level visual assessment with reference to current best practice guidance⁴.

¹ Zone of Influence - the areas and resources that may be affected by the proposed development.

² Joint Nature Conservation Council (2004) *Handbook for Phase 1 Habitat Survey – A Technique for Environmental Audit* (reprinted with minor corrections for original Nature Conservancy Council publication).

³ Species of Principal Importance for the purpose of conserving biodiversity, as listed under Sections 41 (England) and 42 (Wales) of the NERC Act (2006).

⁴ Bat Conservation Trust (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines 3rd edition*. Bat Conservation Trust, London.

3.10 The tree survey involved a ground-based visual assessment of trees for the presence of, or potential to support, roosting bats. The survey was undertaken during the Extended Phase 1 survey on 6 September 2017 by a suitably qualified and licensed ecologist. The trees were searched as thoroughly as possible from ground level, with all elevations covered where accessibility allowed.

3.11 Suitable features for roosting bats sought for during the assessment included:

- Loss/peeling/fissured bark;
- Natural holes e.g. rot holes and holes from fallen limbs;
- Woodpecker holes;
- Cracks/splits or hollow tree trunks/limbs; and
- Thick-stemmed ivy.

3.12 Signs of roosting bats sought for included:

- Bat/s roosting *in-situ*;
- Bat droppings within or beneath a feature;
- Oily marks (staining) around or beneath a feature;
- Oily marks (staining) around roost access points;
- Audible squeaking from the roost;
- Large/regularly used roosts or regularly used sites may produce an odour; and
- Flies around the roost, attracted by the smell of guano.

3.13 Based upon the results of the visual assessment and features/evidence identified, the following ratings for trees were used during the assessment:

- **Known or confirmed roost** - European Protected Species (EPS) licence required for works to tree to be completed lawfully;
- **High potential** - Tree supports one or more features that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time;

- **Moderate potential** - Tree supports one or more features that could be used by bats but are unlikely to support a roost type of high conservation status;
- **Low potential** - Tree supports one or more features that could be used by individual bats opportunistically, or is of sufficient size and age to contain such features; and
- **Negligible potential** - Negligible features likely to support roosting bats.

Limitations

- 3.14 Visual assessments of buildings for roosting bats can be undertaken at any time of year and this assessment was therefore not limited by seasonal or climatic factors.

Badger Survey

- 3.15 Badger activity within the Application Site was assessed during the Extended Phase 1 survey on 6 September 2017. During the survey, any signs of badger activity such as holes, latrines, trails, snuffle holes and hairs on fencing or vegetation were recorded. Where holes of a size and shape consistent with badger were identified, the following signs of badger activity were searched for in order to determine whether they were currently in active use:

- Fresh spoil outside entrances;
- Old bedding material (typically dried grass) outside entrances;
- Holes being cleared of leaf litter;
- Badger guard hairs; and
- Fresh tracks leading to/from the holes.

4. Findings

- 4.1 The section below summarises the baseline ecological conditions determined through the course of update desk-based and field-based investigations and should be read in conjunction with **Plan EDP 1**.

Designated Sites

- 4.2 Information regarding designated sites was obtained during the desk study from the website: MAGIC by EDP and local records centre (SEWBRc) by Thomson Ecology. Statutory designations (those receiving legal protection) and non-statutory designations (those receiving planning policy protection only) are discussed in turn below.

Statutory Designations

- 4.3 Statutory designations represent the most significant ecological receptors, being of recognised importance at an international and/or national level. International designations include Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and Ramsar sites. National designations include Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs).
- 4.4 No part of the Application Site is covered by any statutory designations. There are no national designated sites within 2km of the Application Site whilst a single international designation was identified within 10km of the Application Site. Dunraven Bay SAC is located 9.2km north west of the Application Site and is designated for the occurrence of Shore Dock (*Rumex rupestris*), an Annex II species.

Non-Statutory Designations

- 4.5 Non-statutory designations are also commonly referred to in planning policies as 'local sites', although in fact these designations are typically considered to be important at county level. The search area encompasses the administrative area of VoGC. Non-statutory designations are named Sites of Importance for Nature Conservation (SINC) in this area. Additional designated sites which should be considered at this level include Local Nature Reserves (LNRs) and Ancient Semi-Natural Woodland (ASNW), where these are not covered by other designations.
- 4.6 No part of the Application Site is covered by any non-statutory designation. However, there are a number of such designations within the Application Site's potential zone of influence, as identified during a desk study assessment undertaken by Thomson Ecology and summarised within **Table EDP 4.1**. These constitute four SINCs, one Wildlife Trust Reserve (WTR) and two ancient woodland units.

Table EDP 4.1: Non-statutory designations within the site's potential zone of influence.

Designation	Distance from site	Interest Feature(s)
SINC		
Frampton Court Farm (D39 P1)	1.6km (NW)	Flood alleviation pond with a diversity of plant species present.
Summerhouse Bay West (C53-W1)	1.96km (SE)	Hillfort remains surrounded by semi natural broadleaved woodland and scrub.
East of Meadowvale Nursey (D39 G1)	1.98km (NW)	Designated for purple moor grass and rush pasture.
Cwm Colhuw	1.98km (SW)	Semi improved neutral and calcareous grassland, dense scrub and mixed deciduous woodland and Iron Age earthworks present along with many section 42 bird species.

Designation	Distance from site	Interest Feature(s)
WTR		
Cwm Colhuw	1.98km (SW)	Semi improved neutral and calcareous grassland, dense scrub and mixed deciduous woodland and Iron Age earthworks present along with priority bird species listed under the Environment Act 2016.
Ancient Woodland (Grid Reference)		
SS 97561 67880	1.07km (SW)	Ancient woodland
SS 97173 67943	1.4km (SW)	Ancient woodland

Habitats

- 4.7 Information on habitats within and around the Application Site, was obtained during the initial desk study and Extended Phase 1 survey conducted by Thomson Ecology and updated following an Extended Phase Habitat Survey undertaken by EDP in September 2017. The distribution of different habitat types within and adjacent to the Application Site is illustrated on **Plan EDP 1** with illustrative photographs provided at **Annex EDP 2**. In addition, detailed descriptions of these habitat types are provided below.

Broadleaved Woodland

- 4.8 There are two areas of broadleaved woodland situated off-site, located between the north eastern boundary of the Application Site and adjacent railway line, and between the north western boundary of the Application Site and Llantwit Major Bypass (B4265). Woodland habitat comprises semi-mature ash (*Fraxinus excelsior*) and sycamore (*Acer pseudoplatanus*) with a shrub layer comprising hawthorn (*Crataegus monogynea*), elm (*Ulmus sp.*), dog-rose (*Rosa canina*) and blackthorn (*Prunus spinosa*). A ground flora community is dominated by common ivy (*Hedera helix*).

Species-poor Hedgerow

- 4.9 The north western boundary of the Application Site is delineated by a relatively unmanaged species-poor hedgerow measuring approximately 73m in length. The hedgerow is dominated by hawthorn with occasional elder (*Sambuca nigra*), blackthorn and bramble (*Rubus fruticosus agg.*). Ground flora associated with this hedge comprises frequent common ivy and common nettle (*Urtica dioica*).

Species-poor Hedgerow with Trees

The south western boundary of the Application Site comprises a dense, continuous species-poor hedgerow supporting mature tree standards. This hedgerow measures approximately 8m high and is characterised by immature ash, field maple (*Acer campestre*), sycamore and bramble.

Scattered Broadleaved Trees

- 4.10 The eastern boundary of the Application Site is delineated by scattered trees dominated by semi-mature sycamore. The ground layer is mostly absent, dominated by common ivy with occasional bramble.

Dense Scrub

- 4.11 Sections of dense scrub, dominated by bramble, is associated with both the western and north eastern field boundaries. Areas of scrub are subject to regular management, being cut down to ground level at the time of the survey.

Poor Semi-improved Grassland

- 4.12 The Application Site encompasses a single agricultural field comprising poor-semi improved grassland characterised by a recently mown grassland sward. Grassland habitat supports Yorkshire-fog (*Holcus lanatus*) and cock's-foot (*Dactylis glomerata*), with occurrences of creeping buttercup (*Ranunculus repens*), broadleaved dock (*Rumex obtusifolius*) and common nettle (*Urtica dioeca*).

Overview

- 4.13 The update survey did not identify any significant material changes to the nature and distribution of habitats inherent within the Application Site, with the majority comprising managed, poor semi-improved grassland. Such habitat is considered of negligible ecological value *per se*, albeit with the limited potential to support low numbers of common reptiles.
- 4.14 Boundary woodland and hedgerow habitat, in contrast, is considered to be of greater intrinsic value with potential to support protected and notable species, particularly dormouse and common reptile species.

Protected Species

- 4.15 The likelihood of presence, or confirmed presence, of protected/and or notable wildlife species within the Application Site is summarised below with reference to desk study records and habitat suitability where relevant.

Bats

- 4.16 A desk study undertaken by Thomson Ecology returned two records of bat species within 1km of the Application Site: brown long-eared bat (*Plecotus auritus*) and soprano pipistrelle (*Pipistrellus pygmaeus*).
- 4.17 A ground level inspection of suitable tree standards within and adjacent to the Application Site did not identify any suitable features for roosting bats. With respect to foraging/commuting bats, short poor semi-improved grassland provides a limited foraging resource whilst woodland boundaries and hedgerows provide a linear feature for commuting bats across the Application Site and to the wider landscape. Given that there are no material changes to the distribution of habitats across the Application Site, no further survey with respect to commuting/foraging bats is considered necessary in this instance such that the baseline established during previous survey effort remains valid.

Breeding Birds

- 4.18 A number of records for bird species were returned during the desk study assessment and included barn owl (*Tyto alba*), and osprey (*Pandion haliaetus*), both listed as Schedule 1 species under the Wildlife and Countryside Act (1981). There is, however, no suitable breeding habitat for either of these species onsite, although offsite woodland habitat may provide some opportunities for breeding barn owl.
- 4.19 With respect to a common and widespread bird assemblage, hedgerow boundaries provide suitable cover and a foraging resource for nesting birds.
- 4.20 The update Extended Phase 1 survey identified no significant changes in the ecological baseline with respect to breeding birds. Woodland and hedgerows identified during the update survey have potential to support a breeding bird assemblage comprising common and widespread species only.

Badger

- 4.21 The initial desk study assessment undertaken by Thomson Ecology in 2015 returned no records of badger within 1km of the Application Site, nor records of potential setts within the local area. Ecological survey of the Application Site, completed by Thomson Ecology in 2015 and updated by EDP in 2017, also did not record any evidence of badger use or presence on-site. This species is, therefore, presumed to be absent from the Application Site.

Dormouse

- 4.22 The initial desk study conducted by Thomson Ecology in 2015 returned no records for dormouse within 1km of the Application Site by SEWBReC. The vegetated boundaries of the Application Site do, however, provide suitable dispersal and foraging habitat for dormouse. As such, a habitat suitability assessment and subsequent nest tube survey was undertaken by Thomson

Ecology during 2015 and confirmed dormouse presence onsite, with nests recorded within boundary features (Thomson Ecology, Report Reference ABAW105/006/002).

- 4.23 An update Extended Phase 1 Habitat Survey did not identify any significant material changes to hedgerow and woodland boundaries with regards to their potential to support dormouse, such that their continued presence onsite is assumed.

Otter and Water Vole

- 4.24 SEWBRc returned no records of otter (*Lutra lutra*) or water vole (*Arvicola amphibius*) within 1km of the Application Site. Given the lack of waterways within or adjacent to the Application Site there is no suitable habitat present for either species onsite, such that these species are presumed absent from the Application Site.

Great Crested Newt

- 4.25 SEWBRc returned no records of great crested newt (*Triturus cristatus*) within 1km of the Application Site. There are, furthermore, no ponds onsite, or within a 500m radius of the Application Site. Although the Phase 1 survey undertaken by Thomson Ecology in 2015 identified suitable terrestrial habitat for great crested newt, this is limited to hedgerow and woodland boundaries which will largely be retained within the development. In contrast, managed, poor semi-improved grassland is considered sub-optimal for this species.
- 4.26 In the absence of desk study records and suitable aquatic habitat combined with the limited extent of suitable habitat, great crested newt is thus presumed absent from the Application Site.

Reptiles

- 4.27 SEWBRc returned no records for common reptile species during the desk study undertaken by Thomson Ecology.
- 4.28 The initial Extended Phase 1 survey undertaken by Thomson Ecology identified poor semi-improved grassland habitat on site that was deemed unsuitable for reptiles owing to poor structural diversity within the grassland sward as a result of management activities. Hedgerow and woodland boundaries and associated dense scrub cover is, however, considered more suitable and as such reptile surveys of the Application Site and adjacent agricultural fields comprising Phase 1 of proposed residential development were completed by Thomson Ecology in April 2015.
- 4.29 The reptile surveys identified small numbers of slow-worm (*Anguis fragilis*) indicative of a low population within the Application Site and wider survey area. Slow-worm was identified within the south-east corner of the Application Site and centrally within the adjacent western field.

- 4.30 Although recent management of the grassland sward has rendered the Application Site largely unsuitable for a slow-worm population, hedgerow and woodland boundaries continue to provide suitable habitat.

Other Invertebrates

- 4.31 Habitats present on site are considered likely to support a limited assemblage of common and widespread invertebrate species only, although woodland habitat has the potential to support a more diverse assemblage. No records for invertebrate species within 1km of the Application Site were returned by the desk study completed by Thomson Ecology in 2015.

Other Species Mammals

- 4.32 A desk study returned records for European Hedgehog (*Erinaceus europaeus*) within 57m of the Application Site. Woodland and hedgerow boundaries continue to provide suitable habitat for this species.

5. Summary and Conclusions

- 5.1 This Ecology Update Note has been prepared by The Environmental Dimension Partnership Ltd (EDP) on behalf of Barratt Homes South Wales in relation Phase 2 of proposed residential development of land at Llantwit Major Bypass, Boverton.
- 5.2 Detailed ecological assessments of the Application Site were previously undertaken by Thomson Ecology in 2015 to inform an outline planning application submission. The ecological assessments comprised an Extended Phase 1 Habitat survey, desk study and further detailed protected species surveys for dormouse and reptiles.
- 5.3 Given the time that has elapsed since the Application Site was last surveyed, an update assessment was considered necessary to determine whether any material changes have arisen during the interim period, with respect to the distribution and management of habitats on site and their potential to support protected species.
- 5.4 An Extended Phase 1 Habitat survey, desk study and further detailed surveys with respect to bats and badger was completed on 6 September 2017 by an experienced and suitably licensed ecologist.
- 5.5 No significant material changes to the nature and distribution of habitats onsite were identified during the updated Extended Phase 1 Habitat survey. Poor semi-improved grassland and scrub habitat have, however, been subject to regular management in the interim.
- 5.6 The Application Site remains dominated by poor semi-improved grassland habitat of negligible ecological value, albeit with some limited potential to support protected and notable species, namely common reptiles including slow-worm, their continued presence assumed within

peripheral habitats, as previously confirmed during detailed surveys completed by Thomson Ecology in 2015.

- 5.7 The adjacent woodland and hedgerow network are considered to be of greater ecological importance and offers suitable foraging, refuge and dispersal opportunities to protected and notable species, including foraging/commuting bats, breeding birds and dormouse, the continued presence of dormouse assumed across woody habitats, as previously confirmed during detailed surveys completed by Thomson Ecology during 2015.
- 5.8 A ground level visual assessment of all mature and semi-mature tree standards on and immediately adjacent to the Application Site, identified none with potential to support roosting bats. With respect to badger, no setts or general activity was identified within or immediately adjacent to the Application Site.
- 5.9 Overall, the update survey did not identify any significant material changes to the Application Site, such that the results of the previous ecological assessments completed by Thomson Ecology during 2014 and 2015 and recommendations detailed therein are considered to remain valid.



**Annex EDP 1
Site Layout**

House Type Schedule					
House Code	Net Floor Area (ft ²)	Number of Bedrooms	House Type Name	Number of Units	Total Net Area of Each Unit (ft ²)
ALR	514	1	Alder	4	2056
WAS	615	2	Washington	4	2460
RIC	731	2	Richmond	5	3655
FOL	830	3	Folkestone	2	1660
MAI	830	3	Maidstone	7	5810
BUC	874	3	Buchanan	1	874
ENN	916	3	Ennerdale	1	916
Total No. of Units on Site & Total Net Area (ft²)				24	17431

- Site Key**
- 1.8m high timber close board fence
 - 2m high timber close board fence (with 130mm gaps at base for hedgehog movement)
 - 1.1m high hoop top railings
 - Existing vegetation retained (Refer to landscaping layout)
 - Existing trees retained and root protection zone
 - Existing tree removed
 - Proposed new trees (Indicative only refer to landscaping layout)
 - 1.8m high close board gate
 - Plot numbers
 - Parking space

REV.	DESCRIPTION	DATE

CLIENT
Barratt Homes South Wales

JOB TITLE
Land North of B4265, Boverton, Phase 2

DRAWING TITLE
Phase 2, Site Layout

SCALE @ A3	DATE	DRAWN BY
1:500	Jan '18	RW
JOB NO.	DRAWING NO.	REVISION
1753	TP-01	-

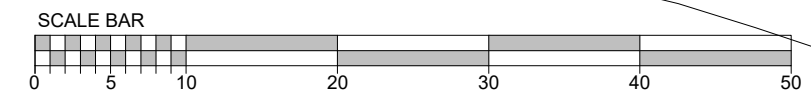
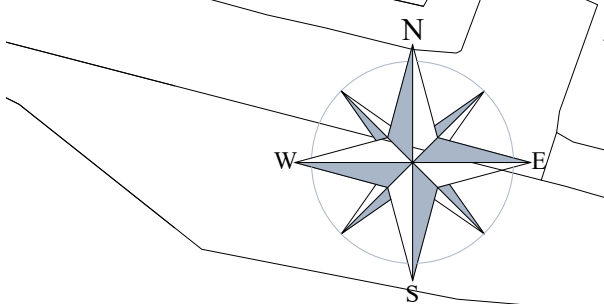


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Annex EDP 2 Illustrative Photographs



Photo EDP 1: The Application Site looking north-east.



Photo EDP 2: North-west corner of the Application Site.



Photo EDP 3: North-eastern boundary of the Application Site delineated by broadleaved woodland.



Photo EDP 4: South-western boundary of the Application Site.

Land adjacent to Llantwit Major Bypass, Boverton
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Plan EDP 1
Phase 1 Habitat Plan
edp3775/d007a 17 November 2017 (CR/EW)



- Site Boundary
- SI Poor Semi Improved Grassland
- Tall Ruderal
- Broadleaved Scattered Tree
- Hedge and Trees Species Poor
- Intact Hedge Species Poor
- Fence

client
Barratt Homes, South Wales

project title
Llantwit Major Bypass, Boverton (Phase 2)

drawing title
Plan EDP 1: Phase 1 Habitat Survey

date	17 NOVEMBER 2017	drawn by	CR
drawing number	edp3775_d007a	checked	EW
scale	1:1,000 @ A3	QA	JTF



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