

Protected Species Appraisal

Barns at Toseland Hall Farm
Toseland Road
Toseland
St Neots

August 2021

For and on behalf of:
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Date of Report
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Declaration

This report has been produced endeavouring to follow the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct and ecological information has been provided in accordance with British Standards BS 42020 2013-Biodiversity-Code of practice for planning and development.

Whilst every effort has been taken to ensure this report accurately identifies potential ecological constraints to development or the likely presence or absence of species and the spatial and temporal use of the site by such species, it must only be viewed as a snap shot in time and reflects the ecological status of the site at the time of survey.
No liability can be assumed for ecological changes that may or may not occur on the surveyed site after the production of this report. The author of this report must be consulted as to the current applicability of the report if there are any seasonal delays in the use of this report.
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Executive Summary

The purpose of this report is to detail the results of a Protected Species Assessment of the application site at Toseland Hall Farm which is made up of barns, former livestock pens and hard-standing. It also aims to identify any potential redevelopment constraints pertaining to protected species and habitats.

The results of the Assessment found the application site to be not designated as a site of importance and neither protected habitats nor species are recorded within or in close proximity to the site. The site is not considered likely to support protected and/or important species at this time.

Consequently, no further surveys are recommended at this time and it is not predicted that the redevelopment of the application site will have an adverse significant effect on designated sites or protected species.

1.1.1 To ensure the redevelopment of the application site results in a net biodiversity gain, it is proposed to erect two bat boxes on the newly converted former piggery building.

2.0 Introduction

2.1 Background

2.1.1 It is proposed to demolish a number of existing barns, construct a replacement agricultural machinery barn and convert a former piggery building into a single dwelling at Toseland Hall Farm, Toseland, near St Neots in Cambridgeshire. The site is located in the rural hamlet of Toseland, in west Cambridgeshire, at grid reference TL235627 and at postcode PE19 6RU. Toseland lies approximately 3.4km to the north-east of the market town of St Neots and approximately 4.5km to the west of the village of Papworth Everard. Toseland itself is surrounded by pastures and fields, with small areas of woodland further afield.

2.1.2 The purpose of this ecological assessment is to detail the results of an initial Protected Species Assessment of the site, primarily concerned with roosting bats, nesting birds and great crested newts *(Triturus cristatus)*.

2.1.3 This ecological study has been commissioned by David Cousans Architects on behalf of the owner, Dr Alex Pilato. The site with which this study is concerned is referred to throughout the report as the application site. The aerial photo below indicates the indicative extent of the development site, which measures approximately 0.3ha, and shows it in its geographical context, within its landscape surroundings.



Plate 1: Aerial photo with indicative development site boundary

2.1.4 The report's author is Keith Seaman who holds a Bachelor of Science Degree in Environmental Studies; Agri-Ecosystem Management, a Diploma of Higher Education in Ecology and a Certificate of Higher Education in Ecology and Conservation. His professional qualifications include membership of the Royal Society of Biology (RSB) registered as a Chartered Biologist and professional grade membership of The Chartered Institute of Ecology and Environmental Management (CIEEM). Keith Seaman also holds Natural England Survey, Research and Development licenses for all species of bat, badger (*Meles meles*), great crested newt, otter *(Lutra lutra),* barn owl *(Tyto alba)* and dormouse *(Muscardinus avellanarius)*.

2.1.5 Keith Seaman has been an academically qualified Ecologist since 1995 and a professionally qualified ecologist since 2004 and since then has gained considerable experience working in both the public and private sectors carrying out Ecological Impact Assessments as well as Protected Species Appraisals and developing mitigation strategies.

3.0 Planning Policy and Legislation

3.1 Relevant National and Local Planning Policies

National Planning Policy Framework

3.1.1 The National Planning Policy Framework (NPPF) superseded Planning Policy Statement 9 (PPS9) in March 2012. The NPPF 2021 states that '*planning policies and decisions should contribute to and enhance the natural and local environment by'*, in part;

- *Minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.*

It also states that '*when determining planning applications, local planning authorities should apply the following principles';*

- *If significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused*
- *Development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;*
- *Development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and*
- *Development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.'*

3.2 Local Plan Policies

3.2.1 The Huntingdonshire Local Plan to 2036 (adopted May 2019) is the current local level policy guidance covering the site. The following policy from the document is deemed, in part, to be potentially relevant to this study;

Policy LP30: Biodiversity and Geodiversity

"A proposal will be required to demonstrate that all potential adverse impacts on biodiversity and geodiversity have been investigated.
A proposal that is likely to have an impact, either direct or indirect, on biodiversity or geodiversity will need to be accompanied by an appropriate appraisal, such as a Preliminary Ecological Appraisal, identifying all individual and cumulative potential impacts on biodiversity and geodiversity. Any further research that is identified as necessary by this appraisal will need to have been carried out and submitted with the proposal….

All possible efforts must be taken to avoid adverse impacts. If it is demonstrated that adverse impacts are unavoidable, they must be minimised as far as possible and then mitigated. Only where this process of avoidance, minimisation and then mitigation is insufficient to fully address adverse impacts will consideration be given to compensatory measures……

A proposal will ensure no net loss in biodiversity and provide a net gain where possible, through the planned retention, enhancement and creation of habitats and wildlife features, appropriate to the scale, type and location of development. Large scale development proposals should provide an audit of losses and gains in biodiversity produced according to a recognised methodology. In seeking to provide net gains for biodiversity reference should be made to the Natural Cambridgeshire publication 'Developing with Nature Toolkit' and the proposal should prioritise measure that:
Complement or enhance existing features of biodiversity value within the design and layout of development,
Provide new biodiversity features within the development
Help reverse the decline of species,
Assist in achieving local targets for priority habitats and species including those set out in Habitat Action Plans,
Improve public access to nature,

Ensure the effective management of biodiversity or geological features,
Contribute to the provision of multi-functional green infrastructure to enhance ecological networks and the Green Infrastructure Priority Areas,
Contribute towards the achievement of good ecological status in water bodies (or not compromise achievement of good ecological potential) in accordance with the Anglian River Basin Management Plan (RBMP) and accompanying catchment action plans; or,
Will help species adapt to climate change."

3.3 Legislation

The Conservation of Habitats and Species Regulations

3.3.1 The Conservation of Habitats and Species Regulations 2017 (as amended) implement the EC Habitats Directive in the UK. These regulations mainly deal with the protection of sites that are important for nature conservation in a European context (eg Special Areas of Protection [SACs] and Special Protection Areas [SPAs]). The legislation also gives protection to certain species of flora and fauna.

3.3.2 The Conservation of Habitats and Species Regulations 2017 (as amended) make it an offence to deliberately capture, kill or disturb wild animals under Schedule 2 of the Regulations. It is also an offence to damage or destroy a breeding site or resting place of such an animal (even if the animal is not present at the time).

Wildlife & Countryside Act (WCA)

3.3.3 The Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way Act (CRoW) 2000 and the Natural Environment and Rural Communities Act (NERC) 2006, consolidates and amends existing national legislation to implement the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and Council Directive 79/409/EEC on the Conservation of Wild Birds (Birds Directive).

Natural Environment & Rural Communities Act (NERC)

3.3.4 The NERC Act of 2006 places a duty on authorities to have due regard for biodiversity and nature conservation during the course of their operations.

4.0 Methodology

4.1 Protected Species Assessment

4.1.1 The Protected Species Assessment involves an appraisal of the application site's habitats as to their likely importance or potential to support protected or important species, as identified under the following legislation; the Conservation of Habitats & Species Regulations 2017 (as amended), the Wildlife & Countryside Act (as amended) 1981 and the Protection of Badgers Act 1992.

4.1.2 Some species and species groups have been scoped out of this study because of the lack of biological records, limitations in geographical distribution and the absence of species-specific suitable habitat and connectivity within or adjacent to the application site. Only those important and protected species and species groups deemed likely to be present on site or affected by the proposals have been included in this report. Because of the presence of barns, and a pond, in very close proximity to the redevelopment application site, only roosting bats, nesting birds and great crested newts are concerned within this report.

4.1.3 The ecological assessment was carried out on the 21st July 2021, in suitable surveying weather conditions, with no restrictions over site access.

4.2 Preliminary Bat Roost Assessment (PBRA)

4.2.1 The specified and adopted methodology for this aspect of the site's survey has been carried out following the guidelines published by The Bat Conservation Trust (Ref. 5). Three buildings have been assessed; the Former Piggery and workshop, the Bullock Barn and the Bullock Barn and Hay Barn.

4.2.2 It must be acknowledged however, that whilst we endeavour to follow those guidelines, we reserve the right to adapt the survey methodology where appropriate as the aforementioned guidelines state that they should be interpreted and adapted on a case-by-case basis according to site specific conditions and professional judgement and examples given are not prescriptive but descriptive.

4.2.3 In carrying out the PBRA, equipment available for use included;

- ATP Instrumentation mini vane thermos-anemometer
- Lancelab telescopic camera lance

- Rigid Micro CA-300 hand-held inspection endoscopic camera
- Leica 10x42 BA Binoculars
- Collapsible ladder
- LEDLENSER P7R LED Torch

4.2.4 The buildings and trees (should any be present) within the application site have been assessed for bat roosting potential based, in part, on the following factors which potentially increase the likelihood of roosting bats; more favourable roosting conditions may include features such as:

- Surrounding feeding and foraging habitat
- The presence of architectural features in the barns such as roof voids, lofts/attics, bargeboards, soffits, lead-flashing, hanging tiles, cavity walls, weather boarding, mortice and tenon jointed roof timbers and ridge tiles and beams
- Lined clay tile or slate roofs
- The presence of potential access points such as cracks, voids crevices and flight openings
- Complex roofs, orientations and wall elevations
- Favourable internal environmental conditions and temperatures
- Tree trunks and branches with cavities, rot holes, exfoliated bark and recesses

4.3 Great Crested Newt Habitat Suitability Index (HSI)

4.3.1 Water bodies, including ponds, can be assessed for their habitat quality and/or potential to support great crested newts using the Habitat Suitability Index (HSI) system. The HSI has been designed to assess ponds using objective and subjective criteria such as pond area, shading, density, macrophyte density and quality of terrestrial habitat. It provides a simple method of habitat assessment and is now the standard repeatable technique applied when assessing how suitable a waterbody is for great crested newts. Consequently, a HSI has been undertaken for the pond on the site and the results of the HSI evaluation(s) have been appended. (It should be noted that, should it be necessary to obtain an EPS disturbance licence, Natural England will expect a HSI to have been undertaken and provided with any licence application).

4.4 Biodiversity Metric 2.0

4.4.1 Based on published guidance – *Biodiversity net gain. Good practice principles for development. A practical guide*. CIEEM, IEMA, CIRIA. London 2019, it has not been deemed necessary to carry out a Biodiversity Metric 2.0 calculation for this application site. Under Technical note T2 – Achieving BNG (Biodiversity Net Gain) on sites with limited or no impact on biodiversity, the application site is defined as a small-scale (or minor) development (of nine units or less). The application site measures only approximately 0.05ha in size.

4.4.2 However, in order to comply with national and local planning policies, the development should still result in a net biodiversity gain and this this has been provided with the installation of two bat boxes on the western and eastern elevations of the newly converted former piggery.

4.5 Limitations

4.5.1 There were no limitations over site access and the entire application site could be assessed.

4.5.2 As to the reliability of the assessment for protected species, it must be further acknowledged that this study is based on the presence of suitable habitat, the results of the local biological records search, geographical distribution and habitat connectivity to support such important species and not on qualitative species-specific surveys. Where the potential for important species has been identified, further species-specific surveys would be considered necessary to be confident of either a positive or negative conclusion as to the presence of protected species on site. Where a European Protected Species Mitigation (EPSM) licence is required, species survey data of the current season and year of the application is required by Natural England.

4.5.3 The Chartered Institute of Ecology and Environmental Management (CIEEM) advises that where mobile species such as bats are concerned, this report is likely to be out of date within 12 - 18 months from publication and may need updating.

4.5.4 This study specifically addresses the issues of potential redevelopment constraints affecting important and protected species and habitats.

4.6 Desk Study

4.6.1 Biological records of protected and important species and habitats from a radius of 2km around the application site have been sourced from the Cambridgeshire & Peterborough Environmental Records Centre (CPERC) on the 26th July 2021. The results of the data search request were received on the 5th August 2021. In addition, all international sites of nature conservation importance within a 10km radius, nationally important sites within a 5km radius and local sites within a 2km radius of the application site have been sourced.

4.6.2 Only species records from the last ten years have been included as it is considered that records older than this are not sufficiently recent to be relevant to this study.

4.6.3 Google earth aerial photographs and DEFRA's Magic Map Application images have been examined of the application site and surrounding landscape as have the relevant Ordnance Survey Explorer Maps at a 1:25,000 scale.

5.0 Baseline Ecological Conditions

5.1 Designated Sites of Nature Conservation Importance

5.1.1 There is a single international site of nature conservation importance within 10km of the application site – Portholme which is designated as a Special Area for Conservation (SAC). It is designated as a Lowland Hay Meadow and is the largest surviving traditionally-managed meadow in the UK and supports a small population of snake's-head fritillary *(Fritillaria meleagris)*. Portholme SAC is located approximately 7.7km to the north of the application site. With such a distance between the application site and the designated site and with no connectivity of habitat between the two, there are no adverse impacts predicted on international sites of importance as a result of the redevelopment of the application site.

5.1.2 There are two Sites of Special Scientific Interest (SSSI) within 5km of the application site; Little Paxton Pits SSSI (also a Local Nature Reserve) and St Neot's Common SSSI. The closest of these to the application site is Little Paxton Pits SSSI, at approximately 3.5km to the west. This site is designated as '*an extensive area of flooded gravel workings of varied ages and is of national importance for wintering wildfowl and an important stopping point for migrants.*' This SSSI is separated from the application site by fields and arable land with no connectivity of wetland habitat and, as such, is not predicted to be adversely ecologically affected by the redevelopment of the application site. Neither SSSI requires consultation under the SSSI Impact Risk Zone.

5.1.3 In addition, there is a single County Wildlife Site (CWS) within 2km of the application site. Toseland Churchyard is located approximately 0.5km to the east of the application site. This LWS is designated because it supports at least 0.15ha of NVC community MG5 crested dog's-tail/black knapweed grassland. It also supports frequent numbers of at least eight neutral grassland indicator species. It does not maintain any habitat connectivity with the application site and is separated from the application site by the village of Toseland. Because of this and the very limited size of the proposed development footprint, it has been concluded that the redevelopment of the application site is unlikely to have an adverse ecological impact on this designated site.

5.2 Habitats

5.2.1 The application site supports no semi-natural habitat or vegetation; the entire application site is comprised of barns and hard-standing.

5.3 Roosting Bats & Nesting Birds

5.3.1 The biological data search returned no bat records from within the data search area. Therefore no assessment as to the presence of bat populations within the locality could be made. However, the application site is surrounded by grassland, pasture, wetland, hedgerows, trees and some wooded areas, therefore, it would be highly likely that bats populations are found in the locality of the application site.

Former Piggery & Workshop







Plates 2 - 5: External and internal views of the Former Piggery and Workshop

5.3.2 Other than a small area at the entrance, this barn is a fully enclosed structure. It is described as a single-storey block-built barn with an unlined corrugated composite cement pitched roof and gable ends. The roof is supported by flush-jointed timber lacking open mortice and tenon joints. The walls are completely sealed denying any potential bat entry into the interior of the barn or workshop. With an unlined corrugated roof and a block wall appearing sealed, there was no potential bat roosting features found within this building. The small open-fronted part of the barn also lacked any bat roosting potential with the open gaps of the corrugations being either dirty and covered in cobwebs or lacking any signs of roosting bats or indicative signs that bats were accessing this part of the barn. Consequently, the Former Piggery and Workshop building is considered to have a negligible bat roosting potential at this time.

5.3.3 With the majority of this barn sealed from the outside, nesting bird potential was found to be negligible. There was no indicative evidence to suggest the open-fronted barn was supporting nesting birds at this time.

Bullock Barn





Plates 6 & 7: Views of the exterior and interior of the Bullock Barn

5.3.4 This modern open-sided barn is constructed from block and unlined corrugated composite cement roofing panels, with a ridge and unlined corrugated tin at the western gable end. The structure is supported by both timber and steel struts and rafters. These supports were found to be flush-jointed with no recessess or cavities associated with open mortice joints.

5.3.5 The barn lacked any open recessess or cavities capable of supporting roosting bats and lacked any indicative evidence of foraging bats such as scattered bat droppings, urine-spotting or fur-staining. This building was consequently considered to also have a negligible bat roosting potential.

5.3.6 There was no evidence of current bird nesting within this building however since the barn is open-fronted it would be available to nesting birds at the appropriate time of year.

Bullock Barn and Hay Barn



Plates 8 & 9: Views of the former Bullock Barn & Hay Barn

5.3.7 This building is constructed from block with unlined corrugated tin rear walls and an unlined corrugated composite cement sloping roof. The roof is supported by flush-jointed timbers and the bullock barn is divided into numerous pens, by low block walls.

5.3.8 The building is open at the front and lacks any potential bat roosting features; no evidence of foraging bats was found with no bat droppings, urine-spotting or fur-staining located.

5.3.9 Whilst there was no current evidence of nesting birds within this building, its open front and side would not preclude the potential for bird nesting in the future.

5.4 Great Crested Newts

5.4.1 Great crested newts are recorded at three locations within the data search area with the closest recorded at Toseland, approximately 322m from the application site. This closest record is considered too far away to provide colonising great crested newts to the pond adjacent to the application site.




Plates 10 & 11: Ornamental Pond at Toseland Hall

5.4.2 The closest pond to the application site is the Toseland Hall pond, which is approximately 60 metres from the application site. This pond is an amenity pond supporting large ornamental fish and the pond appears to lack any submerged aquatic vegetation and the water quality appeared poor. The results of the HSI (which are appended to this report) concluded a score of 0.26 - Poor. Consequently, it is not considered likely that the pond supports great crested newts at this time.

6.0 Ecological Evaluation & Development Constraints

6.1 Ecological Constraints to Redevelopment

6.1.1 The application site is not designated as a site of nature conservation importance, neither is it a recorded site for supporting important or protected species or habitats.

6.1.2 The three buildings were found to have a negligible potential to support roosting bats, with very limited roosting potential and no indicative signs of either roosting bats or the presence of foraging bats evident. None of the three buildings supported any occupied bird nests in 2021 however both the Bullock Barn and Bullock Barn with Hay Barn have the potential, because of their openness, to support nesting birds at any time. Great crested newts are not considered a possible redevelopment constraint as the adjacent pond was found to have a 'poor' potential to support great crested newts.

6.2 Mitigation

6.2.1 As the redevelopment of the application site is not predicted to impact protected species, no mitigation measures are considered necessary at this time.

6.3 Ecological Enhancements/Biodiversity Net Gain

6.3.1 To achieve a biodiversity net gain, two Schwegler 1FF (or similar) bat boxes will be erected - one on the western and one on the eastern elevation of the newly converted piggery building.

Schwegler 1FF Bat Box

6.3.2 The Schwegler 1FF bat box (shown below), is spacious enough for bats to use as a summer roost or nursery site and is open at the bottom, allowing droppings to fall out so does not require any cleaning. It is therefore especially suitable for hanging in a variety of places.



Schwegler 1FF bat box

6.3.3 The Schwegler 1FF is constructed from *Woodcrete*, which is a blend of wood, concrete and clay which will not rot, leak, crack or warp and will last for at least 20 - 25 years, making it suitable for long-term mitigation. Woodcrete is breathable and maintains a stable temperature inside the box and it is painted black to absorb warmth. It also provides a good rough surface for bats to cling on to and climb. To compensate for fluctuations in temperature in spring and autumn, the 1FF is provided with a roughened rear panel made of hard-wearing wood. Depending on their individual temperature requirements, the bats can choose between the cooler *Woodcrete* surface or the warmer wooden panel.

6.3.4 The inner dimensions of the 1FF have a reducing width making it ideal for crevice-dwelling bats such as pipistrelles *(Pipistrellus sp.)* and the noctule *(Nyctalus noctula)*. Its dimensions are; 43cm high, 27cm wide and 14cm deep. Schwegler bat boxes are backed by conservation organisations, government agencies and forestry experts and have the highest occupation rates of all nest boxes. They are carefully designed to mimic natural nest and roost sites and to provide a stable environment.

6.3.5 The boxes will be positioned at a height of between 4 and 6 metres, one facing north and the other facing south to offer a variety of roosting conditions at different times of the year.

6.4 Further Surveys

6.4.1 None are considered necessary at this time.

7.0 Conclusions

7.1.1 The purpose of this report is to identify potential redevelopment constraints pertaining to protected species. Overall, the application site, made up of barns and former livestock pens, has been found to have negligible importance for protected species.

7.1.2 The application site is not designated a site of importance and neither protected habitats nor species are recorded within or in close proximity to the site. The application site is not considered likely to support protected and/or important species.

7.1.3 In conclusion, it is not predicted that the redevelopment of the application site will have an adverse significant effect on designated sites of nature conservation importance or protected species.

7.1.4 The redevelopment will also provide a biodiversity net gain in the form of new bat roosting opportunities in the locality.

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8.0 References

Ref. 1 Chartered Institute of Ecology and Environmental Management. 2017 *Guidelines for Preliminary Ecological Appraisal*

Ref. 2 Chartered Institute of Ecology and Environmental Management. 2017 *Guidelines for Ecological Report Writing*

Ref. 3 Joint Nature Conservation Committee. 2010. *Handbook for Phase 1 Habitat Survey* Revised re-print

Ref. 4 UK Habitat Working Group (2018). *UK Habitat Classification*

Ref. 5 Bat Conservation Trust. 2016. *Bat Surveys for Professional Ecologists Good Practice Guidelines 3rd Edition*

Ref. 6 Sewell D, Griffiths RA, Beebee TJC, Foster J and Wilkinson JW 2013 *Survey Protocols for the British Herpetofauna Version 1.0*

9.0 Appendix 1

9.1 *Results of Great Crested Newt HSI*

Habitat Suitability Index – Fieldwork Proforma

Name of Site Toseland Hall Farm Date 21st July 2021

Pond Number 1

	Criteria Factor								Suitability Index
1	Location (see map-SE is zone A)	Zone A	✓	Zone B		Zone C			1
2	Pond Area (m^2)	180 m^2							0.3
3	Pond drying out in last 10 years	Never dries out	✓	Dries out no more than 2 years in 10 or only in drought		Dries between 3 years in 10 to most years		Dries annually	0.9
4	Water quality	1.0 Good		0.67 Moderate		0.33 Poor		0.01 Bad ✓	0.01
5	Shade (%)	0 10 ✓20 30 40		50 60		70 80		90	1
6	Waterfowl (number seen)	1 Absent		0.67 Minor ✓		0.01 Major			0.67
7	Fish (subjective scale)	1 Absent		0.67 Possible		0.33 Minor		0.01 Major ✓	0.01
8	Pond counts within 1km of site (not separated by major barriers)	18							1
9	Terrestrial habitat within 250m of site	1 Good		0.67 Moderate		0.33 Poor ✓		0.01 None	0.33
10	Macrophyte (% of pond surface area covered by macrophyte cover)	0 ✓ 10 20		30 40		50 60 70		80 90	0.3
								Total HSI <0.5 = Poor (circled) 0.5-0.59 = Below average 0.6-0.69 = Average 0.7-0.79 = Good >0.8 = Excellent	0.26
	Notes Don't add up the figures, multiply them!								