



Longfield Solar Farm

Phase 1 Habitat Survey Verification Report

Document Reference: EN010118/EX/8.14

Revision 1.0

October 2022

Longfield Solar Energy Farm Ltd

APFP Regulation 5(2)(q)

Planning Act 2008

Infrastructure Planning (Applications: Prescribed Forms and Procedure)

Regulations 2009

Quality information

Prepared by	Checked by	Verified by	Approved by
MP [Redacted]	NG	MW	NT
Associate, Ecologist MCIEEM	Associate, Director MCIEEM	Technical Director, Ecology FCIEEM	Project Director

Prepared for:

Longfield Solar Energy Farm Ltd

Prepared by:

AECOM Limited
 Midpoint, Alencon Link
 Basingstoke
 Hampshire RG21 7PP
 United Kingdom
 T: +44(0)1256 310200
 aecom.com

© AECOM Limited. All Rights Reserved. This document has been prepared by AECOM Limited (“AECOM”) for sole use of our client (the “Client”) in accordance with generally accepted consultancy principles, the budget for fees and the terms of reference agreed between AECOM and the Client. Any information provided by third parties and referred to herein has not been checked or verified by AECOM, unless otherwise expressly stated in the document. No third party may rely upon this document without the prior and express written agreement of AECOM.

Table of Contents

1	Introduction	1
2	Method	1
3	Results	2
4	Conclusions	7
5	Figures	8

1 Introduction

- 1.1.1 AECOM was instructed by Longfield Solar Energy Farm Ltd to undertake an update of the Phase 1 Habitat survey, along with an ecological walkover update for protected species of the proposed Longfield Solar Farm (the 'Scheme'). This update excluded a survey of the 'cable route and substation extension land' and the 'Wheeler's Hill, Cranham Road road section' that were also surveyed during 2022, the results of which were submitted earlier in the Examination [EN010118/EX/8.7 and EN010118/EX/8.8]. The mapping for these two areas are included in this report for completeness.
- 1.1.2 This report should be read in conjunction with the Environmental Statement (ES) Chapter 8: Ecology [EN010118/APP/6.1, APP-040] and associated appendices [APP-065 to APP-076]. Further information on the Scheme is provided in Chapter 2: The Scheme of the ES [EN010118/APP/6.1(A), REP1b-011/REP1b-012].

2 Method

2.1 Phase 1 Habitat survey update

- 2.1.1 The Phase 1 Habitat survey update was undertaken on 1st and 2nd August 2022 in accordance with the standard survey method¹. Phase 1 Habitat survey is a standard method of environmental audit involving categorising different habitat types and habitat features within the Scheme. The aim was to identify any changes to the habitats present within the Scheme to update the baseline information for the DCO since previous surveys in 2020 and 2021 as reported in Appendix 8B: Preliminary Ecological Appraisal of the Environmental Statement [EN010118/APP/6.2, APP-066].

2.2 Updated appraisal of the potential suitability of habitats for protected and notable species

- 2.2.1 An updated appraisal was made of the potential suitability of the habitats present to support protected and notable species of plants or animals (as defined by legislation and planning policy in Appendix 8A of the Environmental Statement [EN010118/APP/6.2, APP-065]). Any new field signs, new habitat features with potential to support protected species and any sightings or auditory evidence were recorded when encountered, but no detailed surveys were carried out for any particular species.
- 2.2.2 In addition, specific attention was given to identifying instances of invasive non-native plant species listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) and those 'widespread species' listed in

¹ Joint Nature Conservation Committee (2010) Handbook for Phase 1 habitat survey: A technique for environmental audit.

the Invasive Alien Species (Permitting and Enforcement) Order 2019. Locations of plants or new stands of any such invasive non-native plant species, if found, were recorded.

- 2.2.3 At the time of submission of the DCO application, all the data relating to biodiversity collected in 2020 and 2021 were considered to be in date and valid². It is recommended that a review on data validity is undertaken where data was collected between 12 to 18 months where there are new habitat features suitable for highly mobile species and between 18 months and 3 years that an updated site visit and Preliminary Ecological Appraisal is undertaken. The results of this review is presented in this report and identifies any changes to the previous baseline as assessed in the Environmental Statement [EN010118/APP/6.2] and any further requirements for species surveys that may be required based on the results of this survey.

2.3 Survey limitations

- 2.3.1 Where habitat boundaries coincide with physical boundaries recorded on Ordnance Survey (OS) maps, the resolution was determined by the scale of mapping. Elsewhere, habitat mapping was as estimated in the field and/or recorded by hand-held GPS. Where areas of habitat are given, they are approximate and should be verified by measurement on-site where required for design or construction. While indicative locations of trees are recorded this does not replace requirements for detailed specialist arboriculture survey to British Standard 5837:2012 Trees in Relation to Design, Demolition and Construction. An Arboricultural Impact Assessment has been submitted separately at Deadline 3 during Examination.
- 2.3.2 There were no other limitations to the survey.

3 Results

3.1 Habitats

- 3.1.1 The habitats are largely the same as those reported in the baseline surveys in 2020 and 2021 for the PEA [EN010118/APP/6.2, APP-066]. Updated areas and lengths of habitats are provided in Tables 1 and 2.

Table 1. Area of habitats within the Scheme

Habitat	Area (m ²)	Area (ha)	% of total
A1.1.1 - Broadleaved woodland - semi-natural	18341	1.83	0.40%
A1.1.2 - Broadleaved woodland - plantation	17998	1.80	0.40%
A1.3.1 - Mixed woodland - semi-natural	4	0.00	0.00%
A2.1 - Scrub - dense/continuous	12294	1.23	0.27%

² CIEEM. 2019. Advice note on the lifespan of ecology reports and survey data. April 2019.

Habitat	Area (m ²)	Area (ha)	% of total
A2.2 - Scrub - scattered	2873	0.29	0.06%
B4 - Improved grassland	150952	15.10	3.33%
B5 - Marsh/marshy grassland	2680	0.27	0.06%
B6 - Poor semi-improved grassland	314895	31.49	6.95%
C3.1 - Other tall herb and fern - ruderal	10603	1.06	0.23%
G1 - Standing water	5597	0.56	0.12%
G2 - Running water	1891	0.19	0.04%
HS - Hard surface	62232	6.22	1.37%
J1.1 - Cultivated/disturbed land - arable	3912346	391.23	86.38%
J1.2 - Cultivated/disturbed land - amenity grassland	295	0.03	0.01%
J1.4 - Introduced shrub	111	0.01	0.00%
J3.6 - Buildings	337	0.03	0.01%
J4 - Bare ground	15787	1.58	0.35%
Total	4529236	452.92	100.00%

Table 2. Length of habitats within the Scheme

Linear Habitat	Length(m)	Length (km)
A2.2 - Scrub - scattered	278	0.28
A3.1 - Broadleaved Parkland/scattered trees	5969	5.97
G2 - Running water	969	0.97
J2.1.1 - Intact hedge - native species-rich	1851	1.85
J2.1.2 - Intact hedge - species-poor	4688	4.69
J2.2.2 - Defunct hedge - species-poor	344	0.34
J2.3.1 - Hedge with trees - native species-rich	6816	6.82
J2.3.2 - Hedge with trees - species-poor	2002	2.00
J2.4 - Fence	3653	3.65
J2.5 - Wall	18	0.02
J2.6 - Dry ditch	14317	14.32

- 3.1.2 One field to the east of T9 (see Figure 1.3) has changed from semi-improved grassland to arable. A small section of a field along the cable route east of Boreham Road has changed from tall ruderal herb to semi-improved grassland of similar composition to the adjacent land parcels (see Figure 1.3).
- 3.1.3 A field to the west of Rolls Farm has changed to cultivated land, from ephemeral/short perennial habitat to arable (see Figure 1.1).
- 3.1.4 One species poor hedgerow which was not mapped in the initial baseline surveys but will be retained within the Scheme and was recorded in later hedgerow condition surveys was mapped as part of the update surveys for completeness (Figure 1.2).

- 3.1.5 A small change to a farm storage area from tall ruderal herb to bare ground was recorded (Figure 1.2).
- 3.1.6 There are also some crop changes as expected on an operational farm with rotational cropping patterns, but this does not change the Phase 1 Habitat types within the Scheme.
- 3.1.7 There are some minor changes to habitats adjacent to the Scheme, including to the north around T2 where there are some newly planted cricket bat willow *Salix alba* 'Caerulea' within semi-improved grassland south of the River Ter (Figure 1.1). A field east of Scarletts Farm (outside the Scheme) is now assessed as species poor semi-improved grassland instead of improved grassland.
- 3.1.8 The condition of the habitats is similar to that previously reported in 2020 and 2021 for the Biodiversity Net Gain (BNG) Report **[EN010118/APP/6.5, APP-200]**.
- 3.1.9 There are no other changes to the habitats as previously reported in the baseline surveys for the PEA **[EN010118/APP/6.2, APP-066]**.

3.2 Update on potential suitability of habitats for protected and notable species

- 3.2.1 The desk study data obtained in January 2021 is considered valid and there are no changes to legislation or planning policy that would change the assessment. Table 3 lists the surveys previously undertaken with comments on the validity of the surveys based on the updated walkover survey undertaken in August 2022.
- 3.2.2 There are no changes to the baseline information for the potential suitability of habitats for protected and notable species as reported in the PEA **[EN010118/APP/6.2, APP-066]** and ES chapter **[EN010118/APP/6.1, APP-040]**. The suitability of the habitats to support protected and notable species remains as previously assessed; no new potential constraints have been identified and the existing baseline survey data submitted as part of the DCO Application is considered valid.

Table 3. Baseline protected and notable species data update and validity of baseline data

Baseline survey and relevant technical appendix	Dates of Survey	Comments on any changes to the baseline as reported in the ES chapter.	Existing baseline data valid?
Flora (including invasive non-native species) - Appendix 8C of the Environmental Statement [APP-067]	June and September 2020	As per the baseline in the ES. No significant changes to habitats, no new invasive non-native species were found during the walkover survey.	Yes
Hedgerows - Appendix 8C of the Environmental Statement [APP-067]	June and July 2020 with a condition assessment in 2021 for Biodiversity Net Gain.	As per the baseline in the ES. No changes to extent of hedgerow resource.	Yes
Aquatic scoping, macrophyte and macro-invertebrate surveys, including the presence of any invasive non-native species - Appendix 8D of the Environmental Statement [APP-068]	May, June and September 2020	As per the baseline in the ES. Unlikely to be significant changes to the baseline based on no significant changes to habitats since the surveys.	Yes
White-clawed Crayfish <i>Austropotamobius pallipes</i> - Appendix 8D of the Environmental Statement [APP-068]	May and September 2020	As per the baseline in the ES. Unlikely to be significant changes to the baseline based on no significant changes to habitats since the surveys.	Yes
Amphibians, including Great Crested Newt (<i>Triturus cristatus</i>) - Appendix 8E of the Environmental Statement [APP-069]	Habitat Suitability Assessment – March, September and October 2020 and April to June 2021 Presence or absence and population surveys - March June 2020 and April to May 2021	As per the baseline in the ES. All ponds are still present, however most ponds dried out much earlier in 2022 due to the drought making them less suitable for breeding amphibians. Habitats are of no greater value for amphibians than the baseline.	Yes

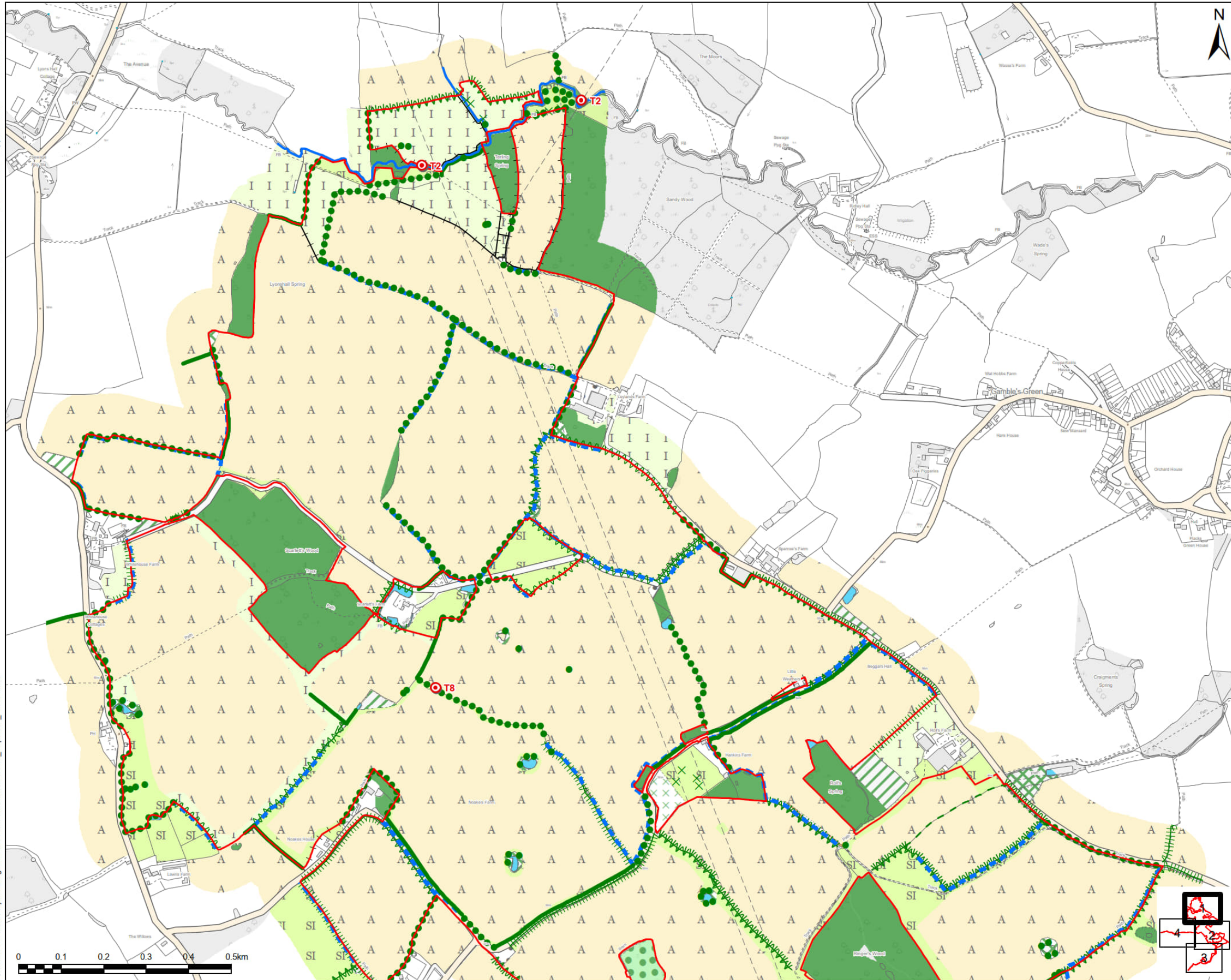
Baseline survey and relevant technical appendix	Dates of Survey	Comments on any changes to the baseline as reported in the ES chapter.	Existing baseline data valid?
Reptiles - Appendix 8F of the Environmental Statement [APP-070]	April to May; and August to September 2020	As per the baseline in the ES. There is no change to the baseline. Habitats are of no greater value for reptiles than the baseline.	Yes
Wintering (non-breeding) Birds (including farmland birds) - Appendix 8G of the Environmental Statement [APP-071]	January to March 2020 and October to December 2020.	As per the baseline in the ES. There is no change to the baseline. Habitats are of no greater value for Wintering (non-breeding) than the baseline.	Yes
Breeding Birds (including farmland birds) - Appendix 8H of the Environmental Statement [APP-072]	April to September 2020	As per the baseline in the ES. There is no change to the baseline. Habitats are of no greater value for breeding birds than the baseline.	Yes
Bats - Appendix 8I of the Environmental Statement [APP-073]	PRA survey: May and July 2020; and April 2021. Activity surveys: May to September 2020.	As per the baseline in the ES. There is no change to the baseline. Habitats are of no greater value for foraging/commuting bats than the baseline. No new potential roost features.	Yes
Badger - Appendix 8J of the Environmental Statement [APP-074]	April 2020, with any evidence of Badger noted during other ecological surveys also recorded. Surveys along the cable route corridor November 2021.	As per the baseline. No additional badger setts within the Scheme or zone of influence.	Yes
Riparian mammals (including invasive non-native species, such as Mink (<i>Mustela vison</i>)) - Appendix 8K of the Environmental Statement [APP-075]	May to December 2020. Surveys undertaken along Boreham Brook in November 2021.	As per the baseline in the ES. There is no change to the baseline. Habitats are of no greater value for riparian mammals than the baseline.	Yes

4 Conclusions

- 4.1.1 Habitat changes recorded in August 2022 as compared with those as reported in the PEA **[EN010118/APP/6.2, APP-066]** and ES chapter **[EN010118/APP/6.1, APP-040]** are all relatively minor and as such there are no new habitat constraints identified that change the conclusions of the ES.
- 4.1.2 The findings of the survey confirm the description of the baseline conditions and no new protected species constraints have been identified that change the conclusions of the ES. The mitigation measures and conclusions in the ES remain valid.
- 4.1.3 As already noted in the ES, any ecological constraints will need to be reassessed if the design and layout of the Scheme change prior to starting work or if there are any significant changes in the use or management of the land that would affect the habitats and species.
- 4.1.4 Following DCO consent, updated protected species surveys may be required to update the baseline due to the time gap from the baseline surveys and start of construction. This would include a walkover survey and protected species survey (e.g. for highly mobile species such as badger) as stated in section 2.3 of the OLEMP **[EN010118/APP/7.13(B)]**.

5 Figures

Revision: 1 Drawn: BF Checked: MP Approved: PB Date: 26/09/2022
 Filename: W:\Active Projects\Longfield Solar Farm Chelmsford\GIS\02_Maps\LSF_Phase1.mxd



PROJECT
 Longfield Solar Farm, Essex

CLIENT
 Longfield Solar Energy Farm Limited

CONSULTANT
 AECOM Limited
 Unit 1 Wellbrook Court,
 Girton, Cambridge, CB3 0NA
 T: +44 (0) 1223 488000
 www.aecom.com

- LEGEND**
- Redline boundary
 - Broadleaved semi-natural woodland
 - Broadleaved plantation woodland
 - Mixed semi-natural woodland
 - Dense Scrub
 - Scattered Scrub
 - Improved grassland
 - Poor semi-improved grassland
 - Tall ruderal
 - Standing water
 - G2 - Running water
 - Arable
 - Ephemeral/short perennial
 - Bare ground
 - Hard surface
 - Broadleaved tree line
 - Defunct species-poor hedge
 - Dry ditch
 - Fence
 - V V V Intact native species-rich hedge
 - Intact species-poor hedge
 - V V V Native species-rich hedge with trees
 - Running water
 - + + + Species-poor hedge with trees
 - Broadleaved tree
 - x Scattered scrub
 - Target note

NOTES
 Reproduced from Ordnance Survey digital map data.
 © Crown copyright 2022.
 All rights reserved.
 Licence number 0100031673

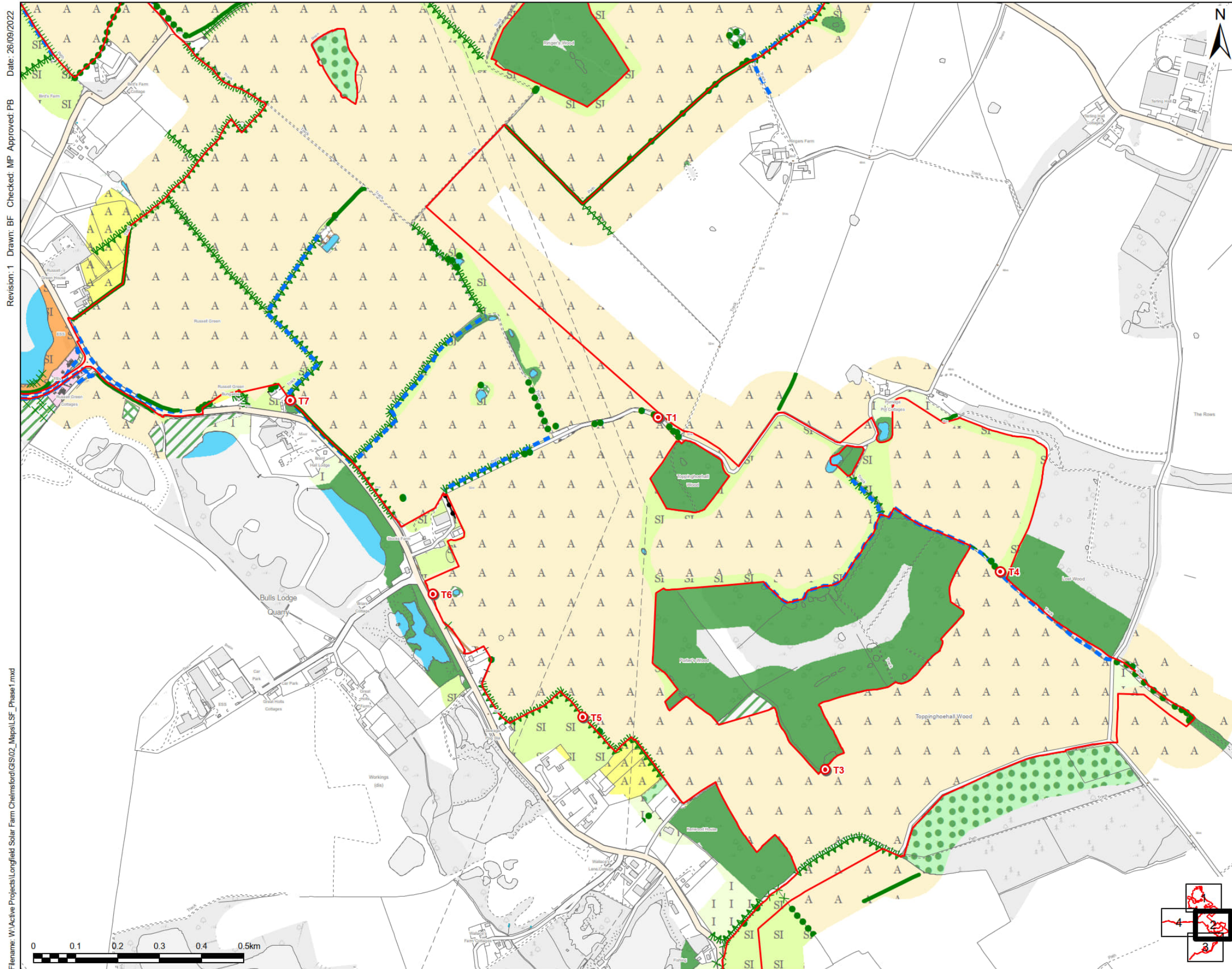
ISSUE PURPOSE
 PEA

PROJECT NUMBER
 60624362

SHEET TITLE
 Phase 1 Habitat

Page 1 of 4

SHEET NUMBER
 Figure 1.1



Date: 26/09/2022
 Revision: 1 Drawn: BF Checked: MP Approved: PB
 Filename: W:\Active Projects\Longfield Solar Farm\Chelmsford\GIS\02_Maps\LSF_Phase1.mxd

AECOM

PROJECT
 Longfield Solar Farm, Essex

CLIENT
 Longfield Solar Energy Farm Limited

CONSULTANT
 AECOM Limited
 Unit 1 Wellbrook Court,
 Girton, Cambridge, CB3 0NA
 T: +44 (0) 1223 488000
 www.aecom.com

- LEGEND**
- Redline boundary
 - Broadleaved semi-natural woodland
 - Broadleaved plantation woodland
 - Mixed semi-natural woodland
 - Dense Scrub
 - Scattered Scrub
 - B2.2 - Neutral grassland - semi-improved
 - Improved grassland
 - Poor semi-improved grassland
 - Tall ruderal
 - Standing water
 - I2.1 - Quarry
 - Arable
 - Amenity grassland
 - Building
 - Bare ground
 - J5 - Other habitat
 - Hard surface
 - Broadleaved tree line
 - - - Defunct species-poor hedge
 - - - Dry ditch
 - Earth bank
 - - - Fence
 - - - Intact native species-rich hedge
 - - - Intact species-poor hedge
 - - - Native species-rich hedge with trees
 - - - Running water
 - x x x Scrub line
 - - - Species-poor hedge with trees

NOTES
 Redline boundary based on Ordnance Survey digital map data.
 © Crown copyright 2022.
 All rights reserved.
 Licence number 0100031673

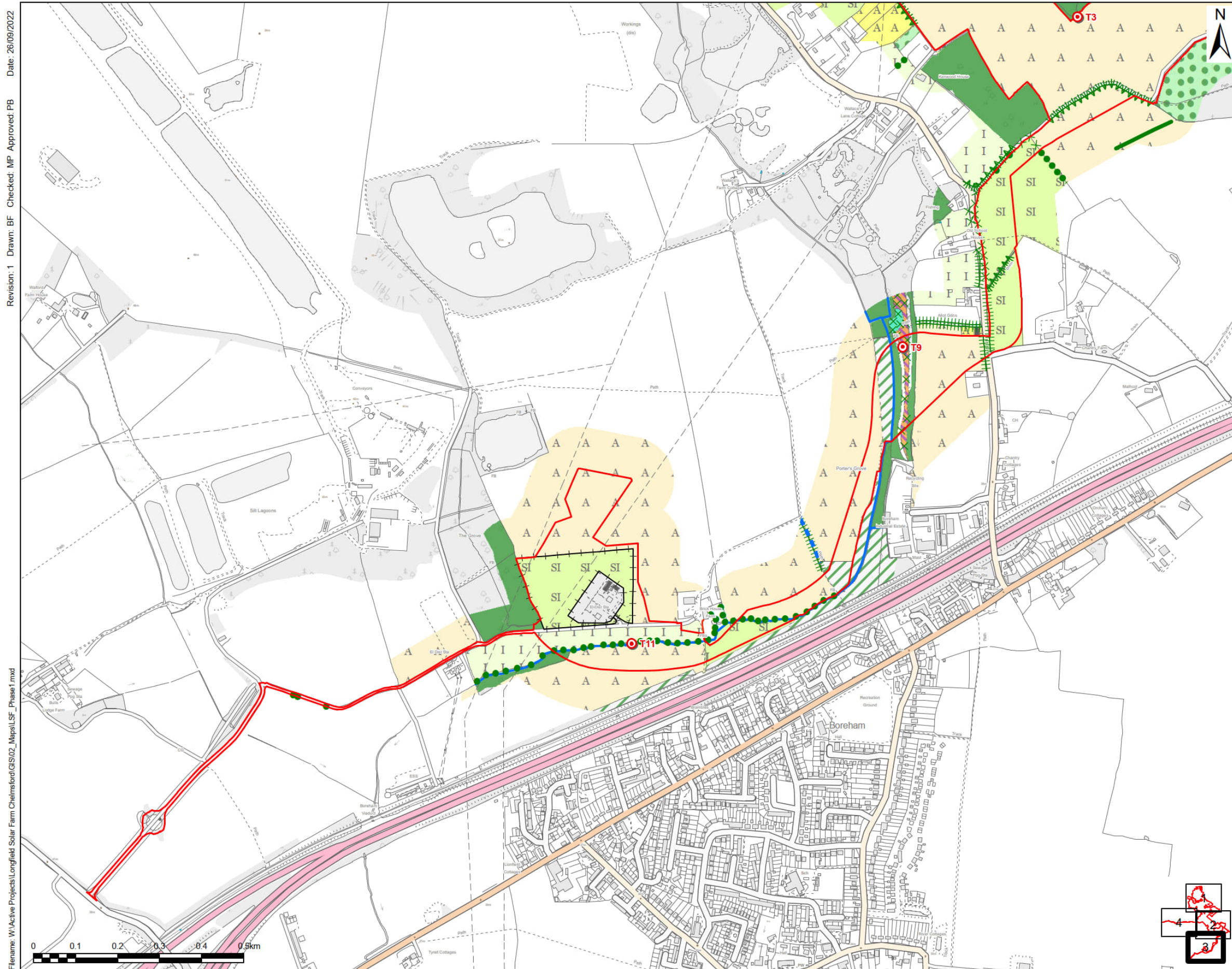
ISSUE PURPOSE
 PEA

PROJECT NUMBER
 60624362

SHEET TITLE
 Phase 1 Habitat

Page 2 of 4

SHEET NUMBER
 Figure 1.2



Revision: 1 Drawn: BF Checked: MP Approved: PB Date: 26/09/2022

Filename: W:\Active Projects\Longfield Solar Farm Chelmsford\GIS\02_Maps\LSF_Phase1.mxd

AECOM

PROJECT
Longfield Solar Farm, Essex

CLIENT
Longfield Solar Energy Farm Limited

CONSULTANT
AECOM Limited
Unit 1 Wellbrook Court,
Girton, Cambridge, CB3 0NA
T: +44 (0) 1223 488000
www.aecom.com

LEGEND

- Redline boundary
- Broadleaved semi-natural woodland
- Broadleaved plantation woodland
- Mixed semi-natural woodland
- Dense Scrub
- Scattered Scrub
- Improved grassland
- B5 - Marsh/marshy grassland
- Poor semi-improved grassland
- Tall ruderal
- Swamp
- G2 - Running water
- Arable
- Amenity grassland
- Building
- Bare ground
- Hard surface
- Broadleaved tree line
- Dry ditch
- Fence
- Intact species-poor hedge
- Native species-rich hedge with trees
- Running water
- X Scrub line
- Species-poor hedge with trees
- Wall
- Broadleaved tree
- X Scattered scrub
- Target note

NOTES

Reproduced from Ordnance Survey digital map data.
© Crown copyright 2022.
All rights reserved.
Licence number 0100031673

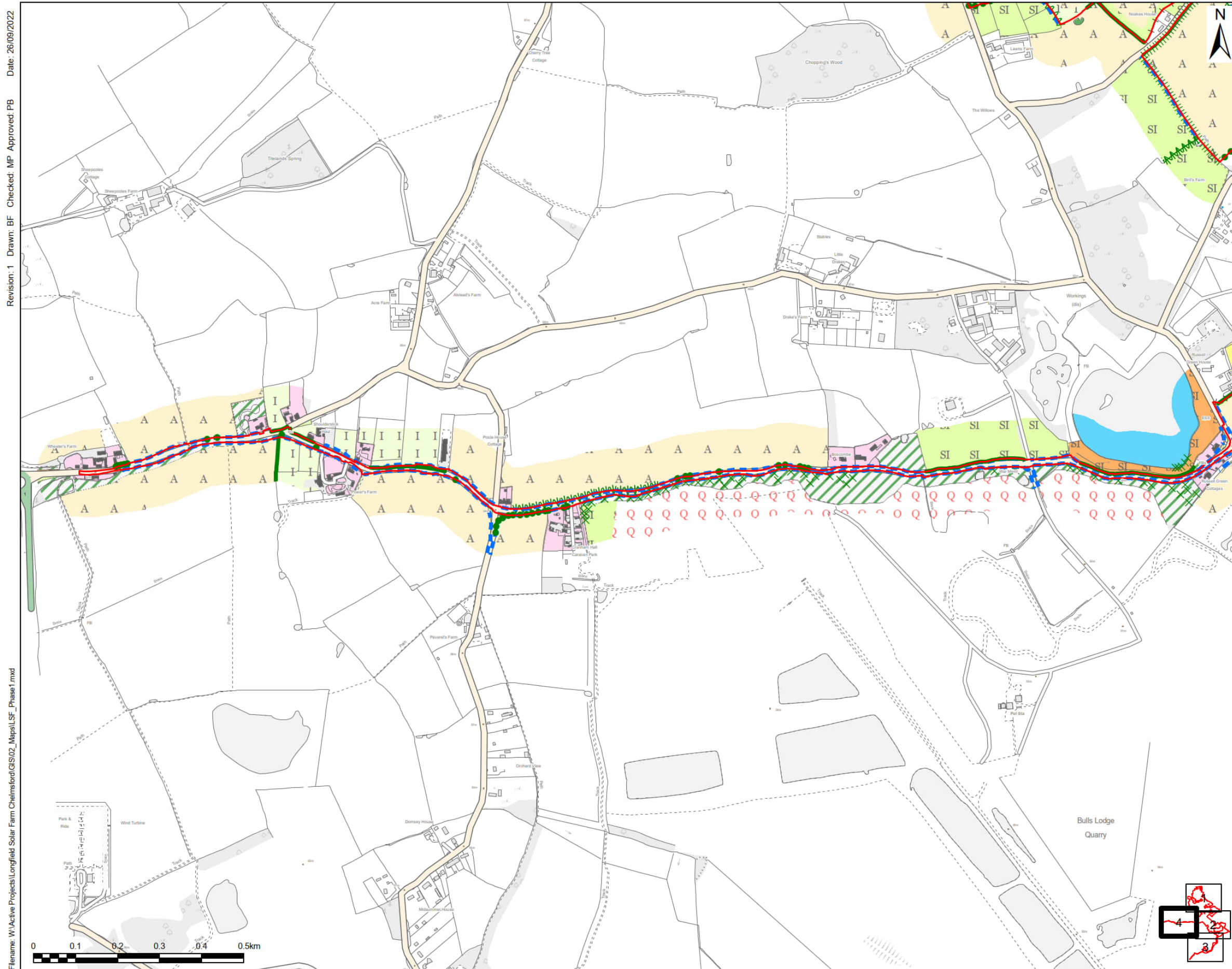
ISSUE PURPOSE
PEA

PROJECT NUMBER
60624362

SHEET TITLE
Phase 1 Habitat

Page 3 of 4

SHEET NUMBER
Figure 1.3



Revision: 1 Drawn: BF Checked: MP Approved: PB Date: 26/09/2022
Filename: W:\Active Projects\Longfield Solar Farm\Chelmsford\GIS\02_Maps\LSF_Phase1.mxd

AECOM

PROJECT

Longfield Solar Farm, Essex

CLIENT

Longfield Solar Energy Farm Limited

CONSULTANT

AECOM Limited
Unit 1 Wellbrook Court,
Girton, Cambridge, CB3 0NA
T: +44 (0) 1223 488000
www.aecom.com

LEGEND

- Redline boundary
- Broadleaved semi-natural woodland
- Broadleaved plantation woodland
- Dense Scrub
- Scattered Scrub
- B2.2 - Neutral grassland - semi-improved
- Improved grassland
- Poor semi-improved grassland
- Tall ruderal
- Standing water
- I2.1 - Quarry
- Arable
- Amenity grassland
- J1.4 - Introduced shrub
- Building
- Bare ground
- J5 - Other habitat
- Hard surface
- Broadleaved tree line
- Dry ditch
- Fence
- W Intact native species-rich hedge
- W Intact species-poor hedge
- W Native species-rich hedge with trees
- W Species-poor hedge with trees
- Broadleaved tree
- x Scattered scrub

NOTES

Reproduced from Ordnance Survey digital map data.
© Crown copyright 2022.
All rights reserved.
Licence number 0100031673

ISSUE PURPOSE

PEA

PROJECT NUMBER

60624362

SHEET TITLE

Phase 1 Habitat

Page 4 of 4

SHEET NUMBER

Figure 1.4