Appendix 9.3: Potential Roost Assessment (PRA) for trees and structures - Technical Note (2020)

Turley

MOTT MACDONALD

Technical Note

Project:	Liverpool Football Club (LFC) Anfield Road Stand Expansion		
Reference:	405016-MMD-XX-XX-FN-EN-0001		
Prepared by:	Sam Smith	**Date:**	05/02/2020
Approved by:	Lorna Meek	**Checked by:**	Rebecca Purslow
Subject:	Potential Roost Assessment (PRA) for trees and structures		

Introduction

Background

Mott MacDonald Limited was commissioned by Legends on behalf of Liverpool Football Club (LFC), to undertake a Preliminary Ecological Appraisal (PEA) in support of a planning application comprising of two elements:

1. Further expansion of Anfield stadium to increase seating capacity through construction of a new Anfield Road stand. This will also involve the realignment of Anfield Road and some minor landscaping north of the stadium on the edge of Stanley Park; and
2. Amendment to the existing temporary permission (expires 2021) to allow for the permanent permission to hold 12 No. concert events and sporting events with the majority during the football off-season between May to August inclusive. Current permission is capped at six events a year, between mid-May to June-end.

Previous bat inspections have been undertaken at Anfield Stadium. In October 2013 an initial bat inspection was undertaken by Mott MacDonald to inform a full planning application for the redevelopment and erection of the Main stand and associated areas around it; and an outline planning application to redevelop the Anfield Road stand to increase spectator capacity. The report identified a single common pipistrelle *Pipistrellus pipistrellus* roosting under a wall fixed table in the level two welfare concourse within the Kop stand (Mott MacDonald, 2014).

Further inspections were completed in April 2018 by Mott MacDonald to inform a permit for a change of use of the stadium for concerts to be held during the football off-season. The inspections found no bats to be present within the Kop stand or the rest of the stadium. However, recent bat droppings were found to be present under the wall fixed table in the same location as the previous inspection identified. Following this, three nocturnal surveys were completed in and around the Kop stand from mid-May to mid-June 2018. No bats were found to be roosting under the wall fixed table and only one bat was recorded passing over the stadium, over the three surveys (Mott MacDonald, 2018).

Based on these survey results, the roost present in the Kop stand was deemed to be a transitional roost for a small number of common pipistrelle bats.

Therefore, following the results of previous surveys undertaken on the site, in 2019 a Preliminary Roost Assessment (PRA) was commissioned at the same time as an additional PEA to:

1. Assess the internal areas of Anfield Stadium and update the current status of the transitional roost previously identified within the Kop stand, which are likely to be impacted by the change in venue type;
2. Assess the internal and external structure of the Anfield Road stand that is to be demolished and redeveloped; and
3. Assess any buildings and trees that are found north of the Anfield Road stand that are likely to be impacted by the proposed new landscaping.

Objective

The objective of this PRA is to firstly assess whether any trees and buildings/structures within the zone of influence of the proposals have suitability to support bats. Then to identify any potential impacts to any trees and buildings/structures that are considered suitable for roosting bats, within the areas for the planned proposals. Therefore, this technical note will provide details of trees and building/structures with suitability for roosting bats and detail recommendations for further surveys and mitigation, where appropriate.

Legislation

All bat species are protected under Conservation of Habitat and Species Regulations 2017 (as amended), with additional protection under the Wildlife and Countryside Act 1981 (as amended). In summary it is an offence to deliberately, intentionally or recklessly kill, injure, or capture any bats or damage, destroy or obstruct access to any structure used for breeding or resting by them. It is also an offence under certain circumstances to disturb them. Seven species are also listed on Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006, which means they are species of principal importance for the purpose of conserving biodiversity. All species identified from local records are North Merseyside Biodiversity Action Plan species.

Methodology

Site visit

A site visit was carried out on the 9th of January 2020 by a Natural England licenced bat ecologist from Mott MacDonald (licence number: 2015-17851-CLS-CLS). The survey area included LFC Anfield Stadium, inspecting all the internal areas, along with assessing the exterior of Anfield Road stand that is to be demolished. Buildings and trees to the north of Anfield Road stand were also assessed due to new landscaping required in this area for the new stand to be built.

Anfield Stadium is located approximately 3km north east of Liverpool City Centre (SJ 36271 93101). The area within the red line boundary in Appendix B is hereafter referred to as the “site” boundary.

Limitations

Due to the size and structure of Anfield Stadium, some areas were unable to be inspected in full due to lack of full visibility, or areas were not accessible to view. Therefore, potential features for bats could have potentially been obscured from view. This was taken into account in the classification of the overall roosting suitability of the stadium and the recommendations of further surveys.

Desk study

A desk study was undertaken to identify designated sites for bats within 10km and records of bats which occur within 5km of the site. Data was obtained from the Merseyside BioBank, as well as relevant publications, reports and online databases. These included the Multi-Agency Geographic Information for the Countryside (MAGIC - https://magic.defra.gov.uk/), Joint Nature Conservation Committee (JNCC) and the North

Merseyside Biodiversity Action Plan. To ensure the validity of the data, only records collected in the last 10 years are reported.

Potential Roost Assessment – Trees and Buildings/Structures

All trees and buildings/structures within the site were assessed for their suitability for roosting bats. Additionally, the site overall was assessed for its suitability for foraging and commuting bats. These assessments were undertaken following guidance set out in *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Collins J, 2016). The suitability of trees and buildings/structures for roosting bats and the suitability of the site for foraging and commuting bats were categorised using the criteria outlined in Table 1. Photos of the structures and trees can be found in Appendix B.

Table 1: Suitability criteria for structures and trees for roosting bats and habitats for foraging and commuting bats

Suitability	Description roosting habitats	Foraging and commuting habitats
Negligible	Negligible habitat features on site unlikely to be used by roosting bats.	Negligible habitat features on site unlikely to be used by commuting or foraging bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain potential roosting features but with none seen from the ground or features seen with only very limited roosting potential.	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream but isolated i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in parkland situation) or a patch of scrub.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat. But unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.	Continuous, high quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. The site is close to and connected to known roosts.

Source: Collins J, 2016

Ecological Survey Results

Desk study

There are no statutory or non-statutory designated sites for bats within 10km of the site.

There are ten granted European Protected Species (EPS) licences within 5km of the site. Seven licences for common pipistrelle were recorded, with the closest identified 1km west of the site in 2013. A licence for common pipistrelle and soprano pipistrelle *Pipistrellus pygmaeus* was identified 2.8km south east of the site in 2015. A licence for common pipistrelle and noctules *Nyctalus noctula* was identified 2.6km south west of the

site in 2017. A licence for common and soprano pipistrelle, brown long-eared bats *Plecotus auritus* and whiskered bats *Myotis mystacinus* was identified 4.4km north east of the site in 2013. No further information of these roosts was available.

One record of bats was recorded within the site, which was the common pipistrelle found roosting within the Kop stand in 2013. Three hundred and fifteen records in total were recorded within 5km of the site; with three bat species recorded. These records are summarised in Table 2 below.

Table 2. Historical records of bats recorded within 5km of the site

Common name	Scientific name	Closest record	Year recorded	Comments
Common pipistrelle	*Pipistrellus pipistrellus*	In the Kop stand on site	2013	184 records, including 31 roosts. One of these roosts is the one identified in the Kop stand
Unidentified pipistrelle	*Pipistrellus sp.*	300m south	2016	19 records including two roosts
Unidentified bats	*Chiroptera sp.*	310m north east	2012	10 records, including one roost
Brown long-eared bat	*Plecotus auritus*	350m north east	2018	Five records including three roosts
Noctule	*Nyctalus noctula*	2km south east	2017	Six records including one possible roost
Nathusius's Pipistrelle	*Pipistrellus nathusii*	3.8km north east	2014	19 records
Soprano pipistrelle	*Pipistrellus pygmaeus*	2.3km south east	2017	71 records including one roost
Whiskered bat	*Myotis mystacinus*	4.2km south west	2018	One record
Nyctalus species	*Nyctalus sp.*	4.7km north east	2013	One record
Myotis species	*Myotis* sp.	4.5km north east	2014	Three records

Source: Merseyside BioBank, 2020

Potential Roost Assessment – Trees

The site was surveyed identifying five individual trees as having low bat roost suitability (see Table 3 and appendix B).

The remaining trees within the site were considered to have negligible suitability for roosting bats and therefore require no further surveys.

Table 3. Suitable features identified for roosting bats within trees

Tree	Description	Grid reference	Bat roosting suitability
T1	Ash *Fraxinus excelsior* – A mature tree with a callus roll noted on the north aspect at 8m. A second callus roll was noted on a branch below this, directed to the sky, but appeared not to extend into the branch.	SJ3625793310	Low
T2	Beech *Fagus sylvatica* – A mature tree with a large crack in the trunk at 12m, on the north east aspect was noted. The crack was created from a fallen branch. The crack is open to the sky. However, this feature does extend down the trunk for 1m, at an angle that could provide a sheltered ingress for potential bats.	SJ3624393296	Low

Tree	Description	Grid reference	Bat roosting suitability
T3	Ash – A mature tree with a callus roll on the south west aspect at 8m up the tree, which appears to extend in.	SJ3631693239	Low
T4	Ash – A mature tree with a large open callus roll on the south aspect at 7m. However, this feature was cluttered by dead ivy in the drop zone of the feature.	SJ3636193192	Low
T5	Sycamore *Acer pseudoplatanus* – A semi-mature tree with think ivy clover. A woodcrete bird box positioned on the north east aspect at 5m was identified amongst the ivy.	SJ3647193139	Low

Source: Mott MacDonald, 2020

Potential Roost Assessment – Buildings/Structures

The site was surveyed identifying four buildings/structures. Due to the size of Anfield Stadium, the stadium was split up into the four different stands and three units (see Table 4 and Appendix B).

Table 4. Suitable features identified for roosting bats within buildings/structures

Building/ Structure	Description	Grid reference	Bat roosting suitability
A.1	Kop stand – This is a single tiered stand constructed of concrete with a metal support structure. The outside of the stand is made of brick with large panel windows. The roof and high elevation walls are made of corrugated metal, with a plastic panelled section of the roof that overlooks the pitch. Access into the stand welfare areas is accessible from multiple pitch side entrances on the north east aspect. Internally, the stand has two welfare levels. Level one (ground level) had a concrete and metal roof, with brick walls and metal supports. Some crevices were noted on the south west where metal supports were against the brick wall, however no evidence of bats was found and the crevices were generally cobwebbed and dust filled. Level two has a corrugated metal roof with brick walls. Where the walls meet the corrugated roof, insulation has been installed leaving no gaps. Crevices were noted under the wall fixed tables of the welfare area on the south west aspect. Bat droppings were noted along the whole length of this crevice within the welfare area. Two common pipistrelle bats were found to be hibernating in the southern corner, behind the wall fixed table near to entrance 208 (TN1, see Appendix B).	SJ3620493051	Hibernation roost confirmed
A.2	Sir Kenny Dalglish stand – This is a two-tiered stand constructed primarily of concrete and a metal structure support, with some of the old foundation brickwork noted on the lower levels of the stand. The outside of the stand is primarily made of brick and flat metal panels with a large full-length window in the centre of the stand, on the south east aspect. The roof and high elevation walls are made of corrugated metal, with a plastic panelled section of the roof that overlooks the pitch. Access into the stand welfare areas is accessible from multiple pitch side entrances on the north west aspect. Internally, the stand has two welfare levels. Level one (ground level) had a metal roof and brick walls. Air bricks at ground level were noted under the staircases leading up to a mezzanine section of the welfare area. These air bricks lead into storage cupboards under the concrete stand. No evidence of bats was found within these areas. Level two has a concrete roof and brick walls. Plastic panels were noted on the south east aspect, allowing natural light into the welfare space. Gaps between the concrete stepped roof was noted along the welfare area. These gaps went all the way through and were open on both sides. These were inspected and no evidence of bats was found within these gaps.	SJ3630093083	Negligible
A.3	Anfield Road stand – This is a two-tiered stand constructed primarily of concrete and a metal structured support. The outside of the building is brick built with flat metal panelling covering the north east aspect of the stand. Small gaps were noted where the metal panels meet the brick walls on the north east aspect. Small gaps in the brickwork were noted on the north and east aspects of the stand above and below circular windows. The roof is made of	SJ3630793158	Low

Building/ Structure	Description	Grid reference	Bat roosting suitability
	corrugated metal. Access into the stand welfare areas is accessible from multiple pitch side entrances on the south west aspect. Internally, the stand has two welfare areas. Level one (ground level) had a concrete roof and brick walls. Small gaps were noted where the cement roof meet the brick walls. An open void space was noted along the entire welfare area. The open void was unlit, with crevices where the roof meets the walls on the north east aspect. Level two had mostly a corrugated metal roof with some areas noted as concrete and plastic panels. Plastic boarding lined the walls of the welfare area. Gaps between metal beams were noted at the north and east ends of the welfare area. These gaps extend upwards into a cavity that is enclosed by bricks on either side. The cavity has a metal roof and the mortar internally is rough and blocks section of the cavity off. These cavities were inspected, and no signs of bats were identified.		
A.4	Main stand – This is a newly redeveloped stand, completed in 2016. The three-tiered stand is generally constructed of concrete with a metal support structure. The outside of the stand is made of red brick and large glass panelled windows. The roof and sides of the stand are made of either corrugated or flat metal panels. Access into the stand welfare areas is accessible from multiple pitch side entrances on the south east aspect. Internally, the stand welfare areas on all levels are open, with a concrete roof and walls. These areas are constantly lit, with tours of the stadium walking around these areas. No potential roosting features or evidence was identified.	SJ3622293149	Negligible
B	Substation building – A brick-built structure with a flat lead roof in good condition. Five metal doors were noted on the south west aspect, with lighting above these doors. These were all well sealed. No potential roosting features or evidence was identified.	SJ3627793258	Negligible
C	Merchandise and Media unit – Two metal containers were recorded. One container has glass panels on the south west aspect and is used for the recording of LFC TV media channel. The other metal container is a merchandise stand. No potential roosting features or evidence was identified.	SJ3621393286	Negligible
D	Group of food vender units – A group of metal containers used as food court were recorded. No potential roosting features or evidence was identified.	SJ3630693220	Negligible

Source: Mott MacDonald, 2020

Foraging and Commuting

The site overall is considered to be low suitability for foraging and commuting bats when assessed following guidance set out in *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Collins J, 2016). This is due to the small amount of suitable habitat, such as the scattered parkland trees, introduced shrub and hedgerows to the north east of the site, on the edge of Stanley Park. Along with the context of the site in an urban environment with a lot of lighting around the site.

Conclusions and Recommendations

Anfield Stadium

The roosting suitability of each stand within Anfield Stadium was assessed for bats. The Main stand and the Sir Kenny Dalglish stand were classified as of negligible suitability to support roosting bats and therefore require no further consideration in relation to roosting bats, as part of the planned proposals.

The Kop Stand

The initial assessment of the Kop stand confirmed two common pipistrelle bats to be hibernating under the wall fixed table along the south west aspect of the welfare area. They were found in the southern end of the

welfare area; however, droppings were noted along the entire length of the welfare area, under the wall fixed table.

Previous inspections completed of the Kop stand in October 2013 had found a single bat to be roosting in the same location. Whereas, the inspection in April 2018 found no bats to be roosting under the wall fixed table. Further nocturnal surveys completed in mid-May to mid-June 2018, also showed no bats to be roosting within the Kop stand, with only one pass recorded during the entire three surveys. It was therefore concluded that bats were not using the roost during the summer months (in the football off-season) and this was a transitional roost. This was considered likely due to the timing of when bats had previously been found and when they were absent from the roost. Additionally, this was consistent with the time of year when a number of evening football matches take place, with the flood lights attracting an increased level of insects around the stadium, that would not normally be found within an urban environment.

However, as the 2020 inspection identifying bats hibernating within the stand, it is concluded that this roost is being used for the majority of the football season (October-March) and therefore the bats that use the roost are adapted to endure high levels of disturbance when the stadium is in use.

Works to Anfield Road Stand

The Kop stand and roost will not be directly impacted by the proposed works to the Anfield Road stand. Works to the Anfield Road stand are proposed to be completed within the summer months of 2020, 2021 and 2022 (football off-season). As the results of the 2018 nocturnal bat surveys found bats to be absent and not using the roost during the summer months, bats are very unlikely to be present and therefore disturbed during the works. These survey results are considered to be still valid and no further surveys will be required for these proposed works.

Permanent permission for events and concerts

The Kop stand and the roost could be directly and indirectly affected by the proposed change in venue use for Anfield Stadium. Through the proposed change in venue use, LFC are looking to hold the majority of concerts over the summer months (football off-season). This could indirectly impact the roost through disturbance. However, the results of the 2018 nocturnal bat surveys, found bats to be absent and not using the roost during the summer months. These survey results are considered to be still valid and therefore the change in venue use will not indirectly affect bats during the summer months. Furthermore, given the high levels of disturbance the bats using the roost for hibernating currently endure during football matches, it is considered unlikely that holding concerts outside the summer months (during the football season) will have a detrimental impact on bats.

The change in venue use has potential to directly impact the roost through obstruction to the roost, should the stage be positioned at the Kop stand and prevent access to the roost. However, with the results of the 2018 nocturnal bat surveys finding bats to be absent and not using the roost during the summer months, it is considered this positioning of the stage would be unlikely to directly impact bats during the summer months (football off-season). However, the roost could be directly impacted outside the summer months (September-April inclusively) should the stage obstruct access into the roost. If it is not feasible to construct the stage in such a way to prevent obstructing access during the months of September-April, when the bat roost is determined to be in use, then a European protected species licence (EPSL) may be required to legally obstruct bats from accessing the roost.

Although the 2018 surveys of the Kop stand are considered to be still valid. It is considered prudent to undertake further monitoring of the roost to further validate the conclusions drawn within this report. Therefore, the following is recommended:

- An inspection of the roost under the wall fixed table should be undertaken during the summer months (May-August) to identify if bats are using the roost. If bats are found to be absent during this time, then the roost area should be cleared of droppings and left for 2 weeks. After a 2-week period, the roost should be inspected again for any signs or evidence of bats.

Anfield Road Stand

The Anfield Road stand was assessed as low suitability to support roosting bats, due to a number of small roosting features noted internally within the level one and two welfare areas, with access to these areas from the pitch side entrances to the south west of the stand. Whilst no evidence of bats was found during inspection, the structure remains as having low potential, and as per good practice guidelines (see Table 1) there is potential for bats to be directly impacted from the proposed redevelopment of Anfield Road stand and indirectly impacted from the proposed change in venue type for the stadium.

During the initial bat assessment, it was acknowledged that due to the size and structure of the stadium, some areas were not able to be inspected in full due to a lack of visibility or areas being inaccessible. Therefore, an increased survey effort to include further surveys is recommended to ensure that the status of bats using the Anfield Road stand is thoroughly assessed.

- Two nocturnal surveys are required consisting one dusk and one separate dawn survey to be undertaken between May and September with at least one being undertaken between May and August. These surveys will be carried out in-line with *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Collins J, 2016). Should these surveys identify a roost, a European Protected Species Licence (EPSL) would be required to legally destroy, damage, obstruct or disturb the bat roosting features identified within the Anfield Road stand.

Landscaping area

Foraging and Commuting

The site is classed as having low suitability for foraging and commuting bats due to the small amount of suitable habitat within the site and the site located within the urban environment. It is considered unlikely that bats would regularly use the site for foraging and commuting purposes due to the lack of suitable habitats on site. This view is further backed up from the bat surveys conducted in 2018, that recorded a single bat pass over three surveys. It is likely that bats would occasionally forage and commute to the site, such as the roosting bats found within the site. However, it is more likely that bats pass over the site when heading to more suitable habitats, such as the ponds and densely covered scattered tree areas of Stanley park that are located 500m north of the site. It is unlikely that the scattered parkland trees and hedgerows on the northern boundary of the site are important commuting routes, due to their relatively short length and lack of connectivity to the wider landscape. Therefore, it is considered that further surveys for foraging and commuting bats are disproportionate for the site and are not required.

Roosting

Buildings

The three buildings identified to the north east of Anfield Stadium on the edge of Stanley Park were considered to have negligible roosting suitability to support roosting bats, therefore no further consideration for these buildings is required.

Trees

Five trees were found to have low roosting suitability for bats and potentially could be impacted by the proposed redevelopment of the area north east of the Anfield Road stand through felling or new lighting.

At present, the plans for new landscaping north of Anfield Road are unconfirmed. It is anticipated that some trees may be required to be felled or new lighting required within proximity to the trees, that could obstruct bats from accessing these features of the trees. Therefore, different options have been outlined below, dependant on the nature of the impacts on low potential trees within Stanley Park.

- If trees are to be felled, individual trees assessed with low bat roosting potential do not require further nocturnal surveys (T1-T5). However, it is recommended that 'soft felling' measures are undertaken, whereby, the trees should be felled in a sectional manner, with brash from the canopy being removed first. Brash should be laid on the ground around the trunk to form a cushion when lowering further branches and trunk sections with suitable roosting features. Suitable roosting features should be lowered, and positioned face up, then inspected by a suitably qualified licensed bat ecologist. Should roosting bats be found or suspected at any time, then works must stop immediately.
- If trees are to be retained and new lighting is installed and directed towards trees with suitable roosting features which illuminates the tree or access to the tree; then a single nocturnal survey may be required to assess whether bats are using this feature for roosting.

Any new lighting should be the lowest permissible lighting levels required and directed towards the target areas to be lit. Light spill accessories should be fitted in sensitive areas such as around the parkland scattered trees located on the edge of Stanley Park. This is in line with the guidance set out in *Bats and artificial lighting in the UK: Bats and the Built Environment series* (BCT and ILP, 2018).

Trees should be retained where possible, although should they require to be removed, then trees should be replaced at a ratio of 2:1.

References

Collins J eds, 2016. Bat Surveys: Good Practice Guidelines, 3rd Edition. London: Bat Conservation Trust.

JNCC, 2004. Bat Workers Manual. Joint Nature Conservation Committee. 2nd ed. Peterborough: s.n.

BCT and ILP, 2018. Bats and artificial lighting in the UK: Bats and the Built Environment series. Bat Conservation Trust and the Institute of Lighting Professionals.

Mott MacDonald, 2014. LFC Initial Bat Assessment, Liverpool FC Stadium Expansion.

Mott MacDonald, 2018. LFC Bat Technical Note, Bat survey results – Anfield Stadium, Liverpool Football Club Event Management.

Appendices

Site Photos

Description	Photograph
T1 – A general view of the ash *Fraxinus excelsior.*	
T1 – A view of the callus rolls noted on the north aspect of the tree.	

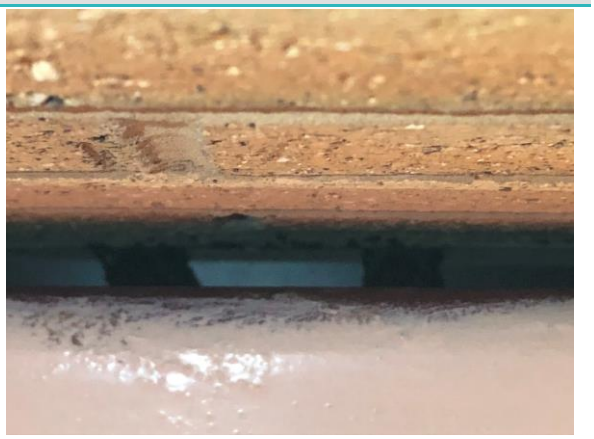
T2 – A general view of the beech *Fagus sylvatica.*	
T2 – A view of the crack noted within the trunk of the tree on the north east aspect.	

T3 – A general view of the ash tree.	
T3 – A view of the callus roll noted on the south west aspect of the tree.	

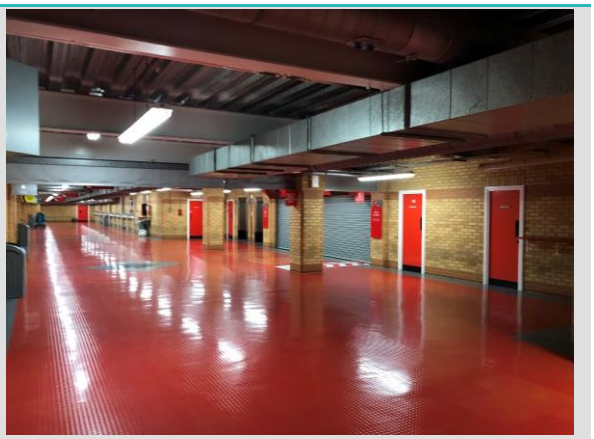
T4 – A general view of the ash tree.	
T4 – A view of the large callus roll on the south aspect of the tree.	

T5 – View of the sycamore *Acer pseudoplatanus* with a bird box positioned on the north east aspect.

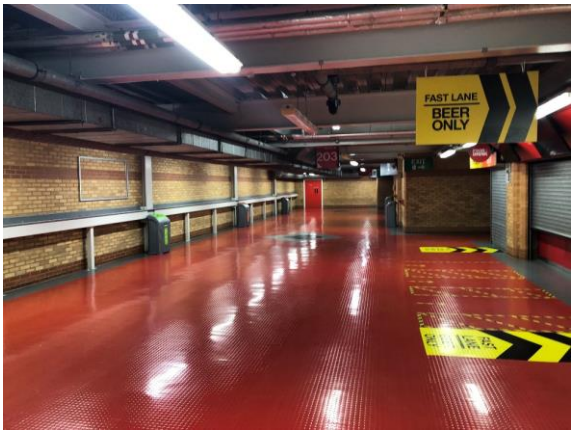
TN 1 – View of the two-common pipistrelle *Pipistrellus pipistrellus* bats identified under the wall fixed table to the southern end of the level two welfare area of the Kop stand.



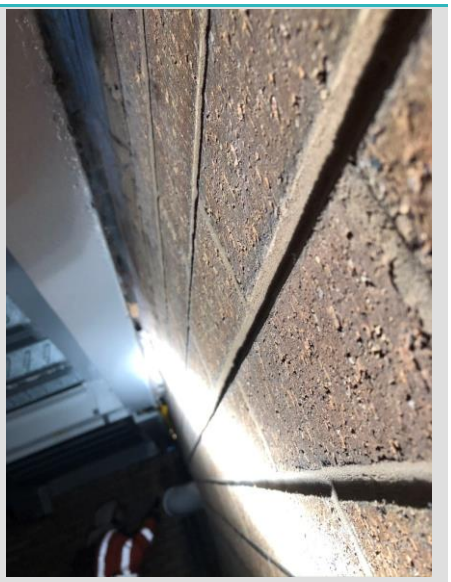
A.1 – View of the southern end, of the level two welfare area in the Kop stand. Roost located under the wall fixed table.



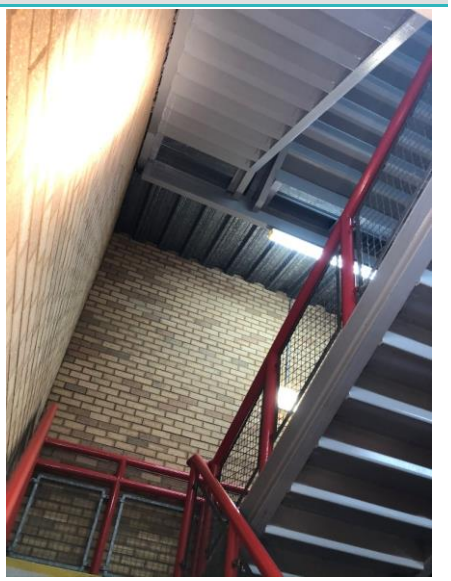
A.1 – View of the western end, of the level two welfare area in the Kop stand and the wall fixed table that runs along the south western aspect.

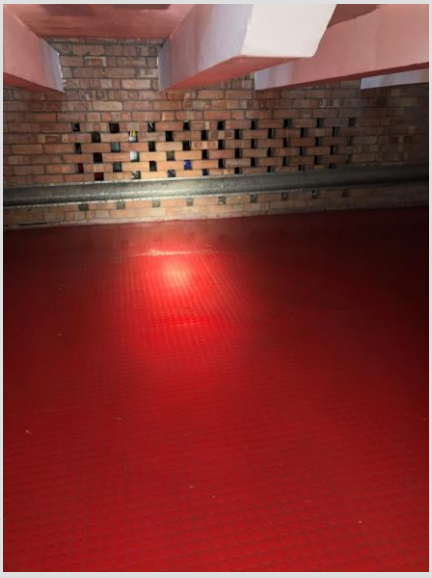
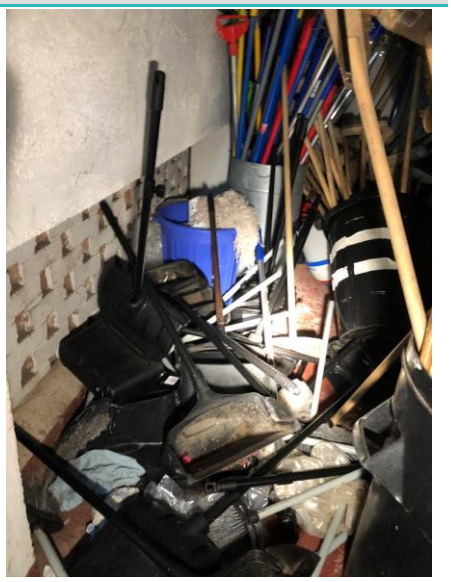


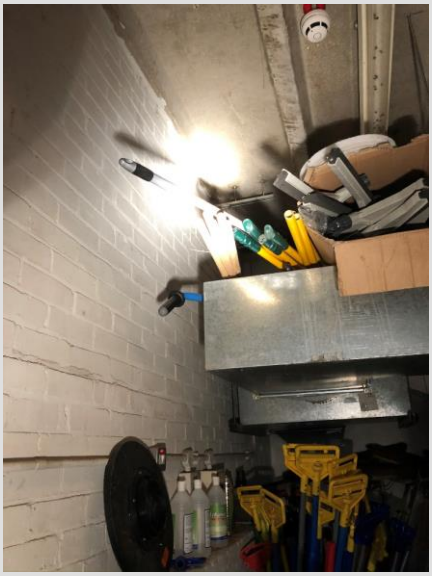
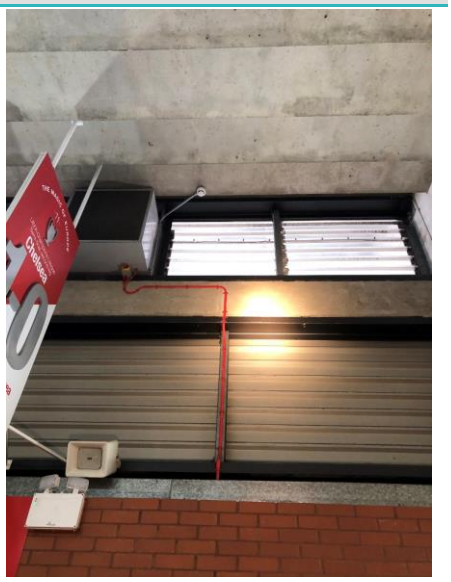
A.1 – View of an open gap between a metal support and the brick wall in the level one welfare area of the Kop stand. The gap was cobwebbed and dusty, with pieces of rubbish wedged between.



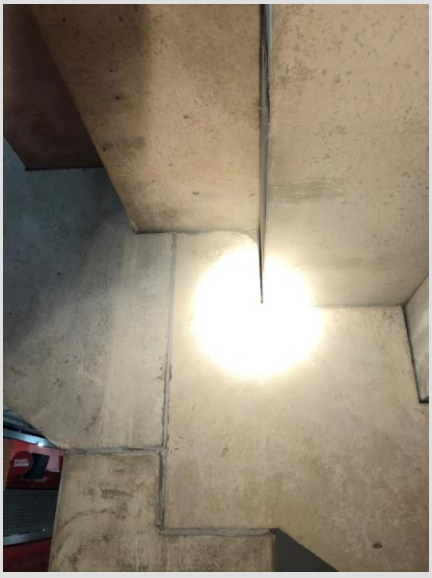
A.1 – View of an open gap between a metal support and the brick wall in the level one welfare area of the Kop stand. The gap was cobwebbed and dusty, with pieces of rubbish wedged between.



A.2 – View of the air bricks under a staircase in the level one welfare area of the Sir Kenny Dalglish stand that lead to a store cuboard.	
A.2 – View of the air bricks in the store cupboard with cluttered items in front of the access points.	

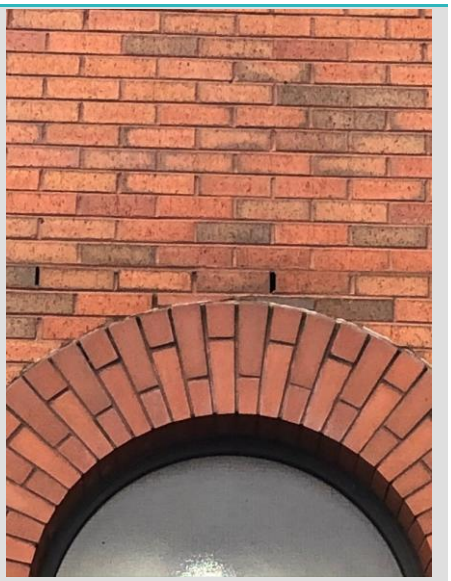
A.2 – View of the store cupboard that can be accessed by the air bricks. This is a cluttered cupboard with the concrete steps as the roof.	
A.2 – View of the plastic panels along the south east aspect of the level two welfare area of the Sir Kenny Dalglish stand.	

A.2 – View of the open gaps noted between the concrete steps within the level two welfare area of the Sir Kenny Dalglish stand.



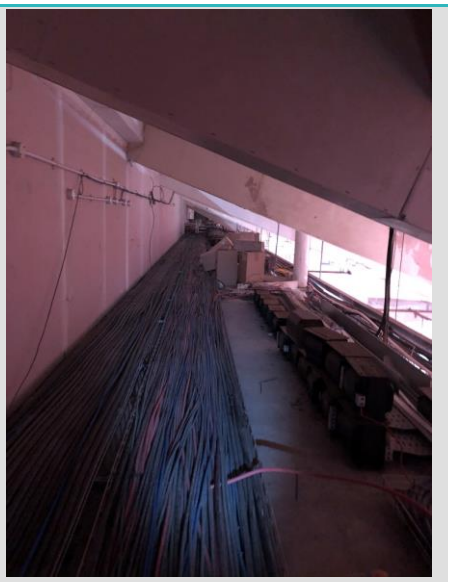
A.3 – View of the north east aspect of Anfield Road stand, with a gap between the metal panels and brick wall.

A.3 – View of the eastern corner of Anfield Road stand, with gaps in the mortar noted in the brickwork above circle windows.

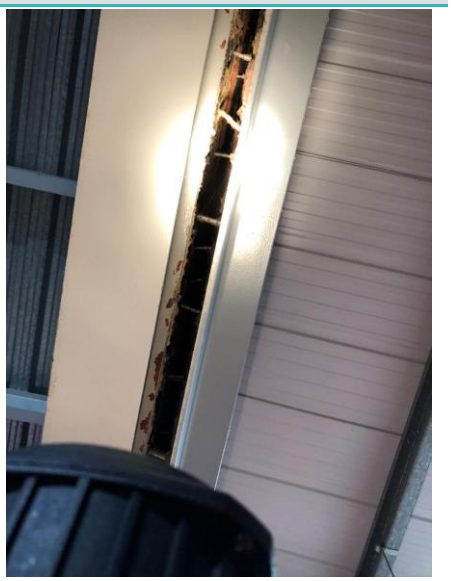


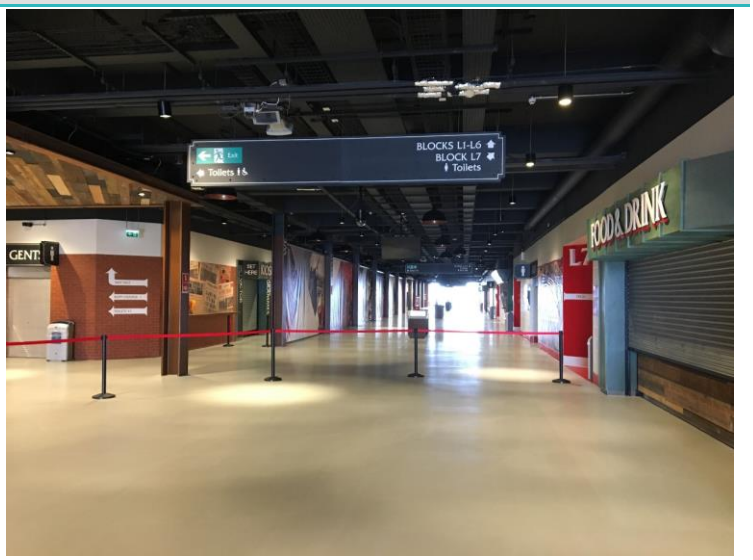
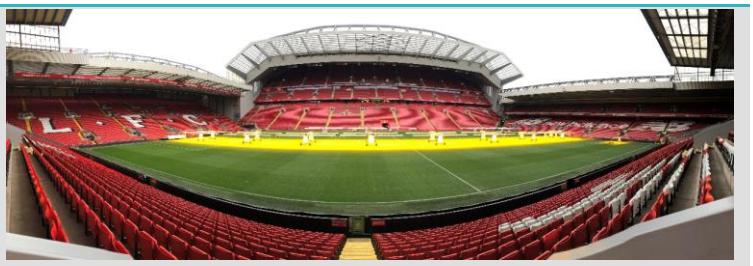
A.3 – View of the gaps where the concrete roof meets the brick walls noted along the south western aspect of the level one welfare area of the Anfield Road stand.

A.3 – View of the open void that runs along the north east aspect of the level one welfare area of the Anfield Road stand.



A.3 – View of the gaps between two metal supports that extends into a cavity with rough mortar. This feature was identified at both north and eastern ends of the stand.



A.4 – View of the concrete roof and lighting in the welfare areas in the Main stand.	
A.4 – A general view of the welfare area in the Main stand.	
A – General view of Anfield stadium from the Sir Kenny Dalglish stand.	

B – View of the south west aspect of the substation outbuilding that is located north east of Anfield Stadium.	
C – View of the west aspect of the metal containers used for LFCTV and selling merchandise.	
D – View of a group of metal containers on hardstanding used as food venders.	

Potential Roost Assessment Results Plan

Location Map

Key to Symbols

- Site boundary
- Confirmed bat roost

Bat potential - Trees

- Low

Bat potential - Buildings

- Confirmed
- Low
- Negligible

Notes

Bat potential : Mott MacDonald Ltd, 2020.
Aerial Imagery : © Bluesky International Ltd. Imagery dated April 2019.
Basemapping : Contains OS data © Crown Copyright and database right 2019
Contains data from OS Zoomstack

Rev	Date	Drawn	Description	Ch'k'd	App'd
P1	31/01/20	AB	For Information	PR	LM

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Client

Title

LFC Anfield Road Stand Expansion Potential Roost Assessment Results Plan

Designed	S Smith		Checked	P Renshaw	
Drawn	A Briggs		Coordination	S Smith	
GIS Check	S Glover		Approved	L Meek	

Scale at A3	Status	Rev	Security
1:1,500	PRE	P1	STD

Drawing Number
405016-MMD-XX-XX-DR-EN-0002

0 50 100 150 Metres

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