



Harcourt Construction (NI) Limited

Tobacco Warehouse, Liverpool

Bat and Peregrine Surveys 2015

03 July 2015

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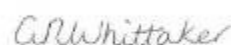


Project Tobacco Warehouse


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Executive summary

Contents	Summary
Site location	Tobacco Warehouse, 10 Saltney St (off Regent Road), Liverpool, Merseyside, L3 7DR OS grid reference: SJ 33748 92046.
Previous reports / surveys	Stanley Dock: Environmental Statement Volume 1 (2007) Environmental Planning & Assessment Limited Environmental Statement Addendum 19 (2011) Darmody Architects
Scope of works	Peregrine Completion of two VP surveys to establish presence and location of nesting peregrine (and to record incidental observations of other notable species such as black redstarts). Bats These surveys comprise two dusk emergence and one dawn re-entry survey. The purpose was to determine the likely presence or absence of bats roosting within the building.
Results	Peregrine Peregrine were confirmed on site and suspected to have nested on the Tobacco Warehouse east facing upper ledge. Bats At least six common pipistrelle bats were confirmed to be using numerous features to roost on the southern, northern and western aspects of the building.
Recommendations for additional surveys / works	Peregrine <ul style="list-style-type: none"> • Additional survey in 2016 April, May and June to confirm and monitor continued presence on site. • Watching Brief is advised to oversee works, in order to prevent disturbance to nesting peregrine • Secure licence to monitor peregrine using CCTV Bats <ul style="list-style-type: none"> • Secure licence from Natural England to allow disturbance / modification and possible destruction of roost sites • Works to be completed under supervision of licensed bat worker <p>Should works be delayed beyond April 2016, survey work should be updated to maintain a record of protected species activity on site to allow prescription of appropriate mitigation.</p>
Potential mitigation and enhancement options	Peregrine <ul style="list-style-type: none"> • Seasonal restrictions to works (mid-August to early March) • Precautionary working methods are advised to prevent disturbance to nesting peregrine. • Incorporation of nesting ledge in final design, which must remain disturbance free. • Retention and creation of additional suitable nesting features. Bats <ul style="list-style-type: none"> • Seasonal restrictions to works (September to early March) • Works to be completed under licence from Natural England • Sympathetic lighting scheme • Brown roof planting to include native species which attract insects



1.0 Introduction

1.1 Background

WYG was commissioned by Harcourt Construction in June 2015 to undertake protected species surveys for bats and nesting peregrine falcons at the Stanley Dock Tobacco Warehouse (referred to as 'the site'). The aim of the surveys was to update existing protected species data for the site in support of a planning application to convert the Tobacco Warehouse at Stanley Dock to residential accommodation; and to identify any potential ecological constraints to any proposed works at the earliest opportunity, to minimise future delays to potential works and provide advice as to how works on site will avoid breaching any UK or European nature conservation legislation.

In 2007, an Environmental Statement (ES) was submitted to Liverpool City Council (LCC) in relation to the full planning application made by Kitgrove Limited for a proposed mixed-use development at Stanley Dock, Liverpool. The ES confirmed the presence of nesting peregrine falcons but did not contain any detailed survey information for bats. In 2011, an addendum to the ES was also submitted to LCC which included bat survey information. The bat surveys concluded that a "small maternity roost", comprising three common pipistrelle bats *Pipistrellus pipistrellus*, was present at the Tobacco Warehouse. The addendum also discussed the mitigation strategy for peregrine falcons *Falco peregrinus* in greater detail than the ES.

1.2 Site location and general description

The Site is located within the Stanley Dock Conservation Area and the Liverpool - Maritime Mercantile City World Heritage Site, in the Liverpool northern dock complex to the north of the Pier Head, approximately 2.5 km to north of the City Centre of Liverpool. The warehouses of Stanley Dock, and most particularly the Tobacco Warehouse, are prominent landmarks in the area. To the east the Site is Great Howard Street and to the west is Regent Road, to the north is Walter Street and to the south is Saltney Street. The overall site covers an area of approximately 5.03 hectares and the Tobacco Warehouse is an ornate brick-built Victorian era Warehouse, which takes an approximate land area of 1.1 hectares, is approximately 224 metres long and 52 metres wide, and has 14 floors (including the basement and ground-floor).

The Tobacco Warehouse has large industrial warehouses and units to the north and south. The North Liverpool Docklands are located immediately to the west and these consist of large areas of open water, hard standing, bare ground with short ephemeral perennial vegetation, industrial units and disused buildings. The Mersey Estuary is situated adjacent to the North Liverpool Docklands approximately 332



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metres to the west of the site. A large area of short ephemeral perennial vegetation is located immediately to the east of the Tobacco Warehouse, situated between Great Howard Street and the Merseyrail train line. Beyond this are areas of residential properties and the Leeds-Liverpool Canal. Directly below the northern facade of the building lies Stanley Dock and beyond this is the newly developed Titanic Hotel / Restaurant (developed from a disused warehouse). Habitats on site comprise primarily of buildings / structures and hard standing areas.

A plan of the existing site layout with the site boundary outlined is provided in Appendix A.

1.3 Development proposals

The proposal is for the redevelopment of the Tobacco Warehouse in to a residential site to include necessary infrastructure such as parking provisions and access.

1.4 Survey objectives

This report provides the results of a series of bat surveys and nesting peregrine vantage point surveys which were undertaken between 16th June 2015 and 1st July 2015. The nesting peregrine survey also included observations for black redstart *Phoenicurus ochruros* as it was noted that this species has also been recorded breeding on adjacent dockland in the past.

The ecological investigations undertaken by WYG included the following objectives:

- A desk study to review existing information, regarding the status of nesting peregrine on site;
- A series of nesting peregrine vantage point surveys;
- A series of dusk emergence and dawn re-entry surveys to determine the presence / likely absence of roosting bats and to identify any significant commuting routes or foraging habitats associated with the Tobacco Warehouse; and
- An assessment of the potential ecological constraints to and impacts from the proposed development and recommendations for avoidance, mitigation and enhancement where appropriate.



2.0 Planning and legislative context

2.1 Legislation

2.1.1 Birds

All wild birds in the UK are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Bird species listed in Schedule 1 of the 1981 Act (as amended), such as peregrine or black redstart, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird (HMSO 1981 & 2000). In addition, the peregrine is listed within Annex 1 of the EU 'Birds' Directive (1979) which warrants special conservation

The conservation status of all regularly occurring British birds has been analysed in co-operation with the leading governmental and non-governmental conservation organisations, including the Royal Society for the Protection of Birds (RSPB), British Trust for Ornithology (BTO) and Birdlife International Birds of Conservation Concern 3 (Eaton *et al.*, 2009). The basis of species ongoing population trends are assigned to one of three lists of Conservation Concern. These are the UK Red, Amber and Green list. Although the lists confer no legal status in themselves, they are useful in evaluating the conservation significance of bird assemblages, and for assessing the potential significance of impacts and informing appropriate levels of mitigation with respect to bird populations. Peregrine falcon is named in the current Green list whilst black redstart is named in the current Amber list as it has suffered a breeding population decline of between 25 – 50 %.

2.1.2 Bats

All British bat species are fully protected through their inclusion in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), and in Schedule 2 of the Conservation of Habitats and Species (Amendment) Regulations 2012 as European protected species.

Under the legislation, it is an offence to intentionally kill, injure or take a bat as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat, or disturb a bat while it is occupying a structure or place which it uses for that purpose.



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The Natural Environment and Rural Communities (NERC) Act 2006 Section 40 requires all public bodies to have regard to biodiversity conservation when carrying out their functions. This is commonly referred to as the 'Biodiversity duty'.

Section 40(1) imposes a duty to conserve biodiversity:

- *"Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity."*

Section 40(3) of the Act explains that:

- *"Conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat".*

The duty applies to all local authorities and extends beyond just conserving what is already there to carrying out, supporting and requiring actions that may also restore or enhance biodiversity.

Section 41 (S41) of this Act requires the Secretary of State to publish a list (in consultation with Natural England) of habitats and species which are of Principal Importance for the conservation of biodiversity in England. The S41 list is used to guide decision-makers such as public bodies including local and regional authorities, in implementing their duty under Section 40 of the Act, to have regard to the conservation of biodiversity in England, when carrying out their normal (e.g. planning) functions. The S41 list includes 56 habitats of principal importance and 943 species of principal importance (list updated 2010).

2.2 Policy

Following the publication of the National Planning Policy Framework (NPPF) in March 2012, *Planning Policy Statement 9 (PPS9): Biodiversity and Geological Conservation (2005)* has been withdrawn. However, *ODPM 06/2005: Biodiversity and Geological Conservation – Statutory Obligations and their impact within the Planning System* (the guidance document that accompanied PPS9) has not been withdrawn and, where more detailed guidance is required than is given within the NPPF, local planning authorities will continue to rely on ODPM 06/2005.

This guidance requires local planning authorities to take account of the conservation of protected species when determining planning applications and makes the presence of a protected species a material consideration when assessing a development proposal that, if carried out, would be likely to result in harm to the species or its habitat.



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In the case of European Protected Species such as bats, planning policy emphasises that strict statutory provisions apply (including the Conservation of Species and Habitats (Amendment) Regulations 2012) to which a planning authority must have due regard.

Where developments requiring planning permission are likely to impact upon protected species it is necessary that protected species surveys are undertaken and submitted to meet the requirements of paragraph 98 of ODPM Circular 06/2005 which states that:

'The presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat.'

General guidance within the body of the NPPF which are also potentially relevant to the possible presence of protected species at the site includes the following statements:

"The planning system should contribute to and enhance the natural and local environment by:

- Protecting and enhancing valued landscapes, geological conservation interests and soils;*
- Recognising the wider benefits of ecosystem services;*
- Minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures"*

"Local planning authorities should set criteria based policies against which proposals for any development on or affecting protected wildlife or geodiversity sites or landscape areas will be judged."

"When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:

- If significant harm 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."*



2.3 Biodiversity Action Plan

The peregrine falcon and black redstart are both named within the North Merseyside Biodiversity Action Plans (NMBAP) for urban birds.

The NMBAP also considers eight species of bat, including common pipistrelle *Pipistrellus pipistrellus*, to be of local conservation importance.

The UK BAP lists seven bat species as conservation priorities, including soprano pipistrelle *Pipistrellus pygmaeus*, noctule *Nyctalus noctula* and brown long-eared bat *Plecotus auritus*.



3.0 Survey methodology

3.1 Peregrine Falcon

3.1.1 Desktop Review

The desktop review analysed existing site specific information, regarding the status of nesting Schedule 1 species on site. This comprised studying the previous ecological / environmental reports for the site and the use of county bird reports.

3.1.2 Building Inspection

A building inspection was carried out on the 16th June 2015 to determine potential / suitable nest sites and plucking areas used by peregrines; the location of such features informed the positioning of vantage points for further surveys situated surrounding the survey area. The building was assessed externally from the ground and internally three of fourteen floors were surveyed to assess general internal conditions.

3.1.3 Vantage Point Surveys

Vantage Point (VP) surveys were carried out based on peregrine monitoring methods guidance provided in *Gilbert, G, et.al. (1998). Bird Monitoring Methods: a manual of techniques for key UK species* in order to identify the potential nesting location of peregrine on the Tobacco Warehouse, and to ascertain the growth stage of any juvenile birds still in the nest. Two vantage points (A & B) were considered suitable to provide adequate cover of the features identified during the building inspection. These vantage points were located at the following approximate Ordnance Survey Grid References (OSGR) VPA SJ 33846 92146, VPB SJ 33882 92081.

Surveys were undertaken by a suitably qualified and experienced ornithologist (Daniel Foy). All peregrine falcon (primary target species) were counted and their flight lines accurately mapped by the observer using binoculars (e.g. Viking 10x45) and a high-powered telescope (e.g. Opticron HDF 30x wide angle). Photographs were taken at a great distance (to avoid disturbance to the peregrines) using an iPhone 5 through the Opticron HDF telescope.

When the target species (peregrine) was recorded in flight, the following details were recorded: start and duration time, species (including age and sex where possible) using the standard British Trust for



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Ornithology (BTO) two letter species codes (Gilbert *et al.*, 2002). Each flying bout was numbered and cross-referenced to a map of the observed flight path.

As black redstarts are known to be present in the area incidental observations for this species were also made from the pre-determined vantage points and whilst walking through the site, singing birds were listened for during the period of the surveys. Limitations

Gilbert *et al.* (1998). *Bird Monitoring Methods: a manual of techniques for key UK species* advises that 1-2 initial presence / absence surveys should be carried out in March / April. These are intended to identify all suitable nesting features favoured by peregrines and to ascertain if territorial peregrines are located on site. Two further surveys are then advised for June.

Due to the timing of the commission (mid-June 2015) only two visits in June were completed and therefore a full breeding bird survey for black redstarts could not be completed and the peregrines were within the final stages of the nesting period which resulted in difficulty confirming the exact nest location used by peregrines during the breeding season 2015. However, it is considered that the timing of the survey did not impact on the success of determining peregrine presence on site.

These survey results are considered to be valid for a period of ten months i.e. until the next breeding bird season in 2016.

3.2 Bat Survey

3.2.1 Building inspections

A building inspection was undertaken on 16th June 2015 by WYG Consultant Ecologists Georgina Whittaker GradCIEEM¹ and Daniel Foy. Survey conditions were dry, cloudy with occasional sunny spells and with clear visibility. The inspections were completed in accordance with Bat Surveys: Good Practice Guidelines (Hundt, 2012).

The external inspection of the building comprised a search for evidence of use by bats such as staining, scratch marks, feeding remains and droppings. The inspection also included an assessment of features which had the potential to support roosting bats, such as holes in the brickwork, lifted tiles or access to cavity spaces.

¹ Graduate Member of the Chartered Institute of Ecology and Environmental Management



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The internal inspection of the main building involved an assessment of its suitability to support roosting bats and evidence of bat activity such as feeding remains and droppings.

For full building inspection details please see Appendix C.

3.2.2 Emergence and re-entry surveys

The techniques used for bat emergence and re-entry surveys at the various suitable access points identified during the internal and external inspections followed the standard methodologies outlined in Bat Surveys: Good Practice Guidelines (Hundt, 2012). The BCT recommend minimum survey effort at a building rated as having **high or confirmed** potential to support roosting bats is three surveys to comprise at least two dusk (emergence) and one pre-dawn (re-entry) surveys.

The dusk emergence surveys were conducted from approximately half an hour before sunset until up to two hours after sunset; the dawn survey was conducted from approximately ninety minutes before sunrise until fifteen minutes after sunrise. Surveyors were stationed at previously identified suitable roost features and remained in place monitoring general bat activity for the duration of the survey.

During the survey, the following details were noted:

- Frequency at which bats were detected;
- Location within the survey area / proximity to the building(s);
- Number of bats present;
- Number of bats recorded entering / exiting the building(s);
- Whether bats appeared to be foraging or commuting; and,
- Weather and temperature.

The bat detectors used by surveyors were BatBox Duet frequency division detectors and a Wildlife Acoustics Echo Meter EM3. The bat detectors allowed surveyors to passively scan different ultrasonic frequencies, whilst allowing specific species of bat to be actively detected. Bat echolocation calls were recorded using MP3s for later sound analysis using specialised software (BatScan).



3.2.3 Limitations

External inspection of the Warehouse was constrained by the height of the structure and the vast number of potentially suitable features. The fourteen storey building comprises over 27 million bricks and over 30,000 panes of glass. However, it is considered that the subsequent bat surveys took place from vantage points that offered a clear view of all building aspects which allowed the approximate locations of bat roost features to be identified.

(<http://www.liverpoolworldheritage.com/visitingthewhs/areas/stanleydock/tobaccoWarehouse.asp>).

Similarly, due to the number of internal floors (thirteen plus a basement), the size of each floor, the condition of the building and the number of broken windows on each floor (in excess of 600) the internal inspection was only carried out on three floors i.e. the ground floor, fourth floor and top floor. The inspection comprised an assessment of 'general' suitability rather than a detailed search for evidence. It is considered that this did not limit the assessment of the suitability of the interior spaces to support roosting bats; however, evidence such as droppings or dead bats may not have been recorded. It is also notable that due to the vast number of features present an endoscope inspection was not completed as it was considered to be impractical at this point of investigation.

All of the bat surveys were undertaken during the bat active season and under favorable weather conditions and, therefore, are not considered to be a limitation to the effectiveness of the emergence surveys.

The details of this report will remain valid for a period of up to eighteen months from the date of the last survey (30.06.15). Beyond this period, if works have not yet been undertaken, it is recommended that a review of all ecological conditions on site be undertaken.

4.0 Results

4.1 Building Description

The Warehouse is a brick building comprising 13 floors and a basement. Over 600 windows are present on the northern and southern aspects containing many smashed or partially smashed glass panes. The building is adjoined to the South Warehouse by three bridge walkways (Photographs 1-4).



Photograph 1. Western aspect of building



Photograph 3. Southern aspect of building



Photograph 2. Northern aspect of building



Photograph 4. Eastern aspect of building

The ground floor comprises mainly open plan loading bays with a grid arrangement of vertical supporting pillars (Photograph 5) and several brick dividing walls with open doors. Internal brick walls along the eastern end of the building suggest that internal offices may have once existed. The ground and ceilings comprise hard standing concrete and several man-made holes were recorded between floors (Photograph 6).



Photograph 5. Ground floor



Photograph 6. Second / third floors

The roof consists of two series of hip style roofs (Photograph 7) running north-south and two series of open gabled roof structures running west-east (Photograph 8). The two aspects of the hip roofs have tiled surfaces underlain by wooden planks and intermittent skylights. Wooden turret boxes are present along the ridges of the hip roofs. The northern aspects of the open gabled roofs consist of intact, partially intact and broken window panes whereas the southern aspects have a tiled surface underlain by wooden planks. The roof can be accessed via three brick stairwells by climbing a vertical ladder (Photograph 10).



Photograph 7. Hip style roof section



Photograph 8. Open gable roof section



Photograph 9. Open gable roof section



Photograph 10. Ladder within brick structure

The basement consists mainly of open plan spaces divided by bricked walls with open doors (Photograph 11). Multiple alcoves are present along the northern aspect of the basement considered to have formally functioned as loading bays although these are now filled in (Photograph 12).



Photograph 11. Entrance to basement



Photograph 12. Alcove within basement

4.2 Peregrine Falcon

4.2.1 Desktop Review

County Bird Report

The State of Lancashire's Birds: An atlas survey of the breeding and wintering birds of Lancashire and North Merseyside, 2007-2011 (White, S.J. (Ed.), McCarthy, B., Dunstan, S., Martin, S.J., Harris, R.J., Hulme, G. and Marsh, P.J. 2013) is the most recent report relating to the status of birds within the Lancashire and North-Merseyside region. Information was gathered from this source to help inform the survey effort.



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The report discusses the importance of urban nesting peregrines including the presence of peregrine at Liverpool Docklands (the Tobacco Warehouse):

"Also striking has been the spread of urban nesting [peregrine]. A pair in Liverpool's dockland in the mid-1980s was amongst the first to make this adaptation nationally, but this has now become established with four sites in Liverpool and singles in St. Helens, Southport, Blackpool and Preston. Sites used include churches (and Liverpool Cathedral), disused mill chimneys, gasometers, disused power stations and electricity pylons; much of this increase has occurred since 2000. The Lancashire population was estimated at 35 pairs in 2000 and is now considered to have increased to 50 pairs."

White, S.J et al. (2013) The State of Lancashire's Birds: An atlas survey of the breeding and wintering birds of Lancashire and North Merseyside, 2007-2011. Pg. 88.

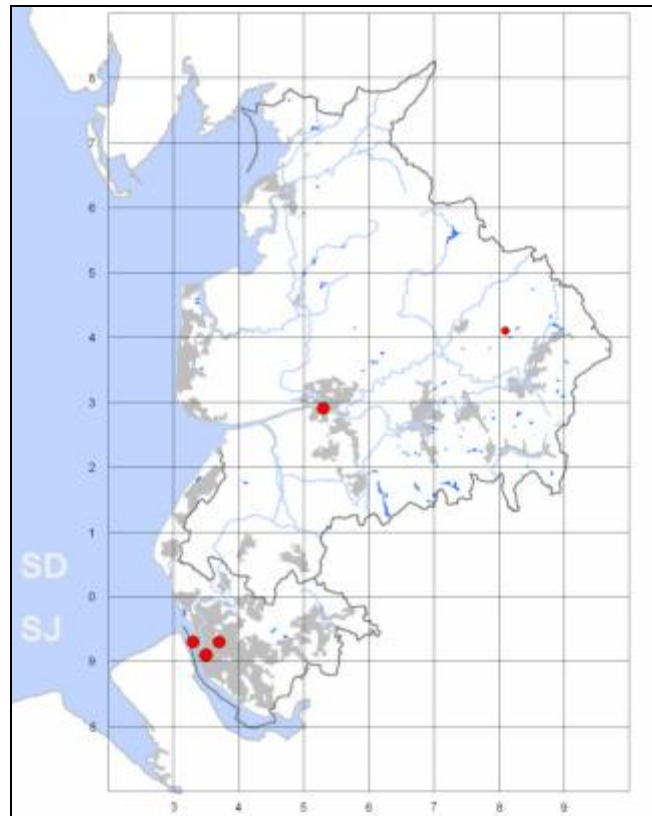
This report highlights the current importance of the Tobacco Warehouse nesting peregrines in a regional context. The historical presence of a sustained breeding population of peregrines on the Tobacco Warehouse represents a nationally important event in the ecology of peregrines in the UK, with the Tobacco Warehouse population being one of the first examples of the species nesting on urban man-made structures.

The report also discusses the regional and national importance of the Liverpool Docklands as a confirmed current and historic (since at least 1977) confirmed breeding location.

"Confirmed breeding by Black Redstarts has been recorded irregularly in a small number of urban and dockland locations in Lancashire since colonisation of Liverpool from at least 1977. The 1997-2000 Lancashire Atlas estimated an annual population of two to five pairs, with nesting confirmed in four tetrads, two in Liverpool. The present survey [2007-2011] recorded confirmed or probable nesting in four tetrads, three of them in Liverpool, where the docklands and commercial district have been occupied probably continuously since the late 1970s. The annual population is estimated at one or two pairs; small though this is it remains significant in the context of a national population of 19-44 pairs."

A map is provided below (Figure 1) taken from *The State of Lancashire's Birds: An atlas survey of the breeding and wintering birds of Lancashire and North Merseyside (2007-2011)* which highlights the importance of the Liverpool Docklands for the regional breeding population of black redstart.

Figure 1 - Black Redstart: breeding distribution, 2007-2011

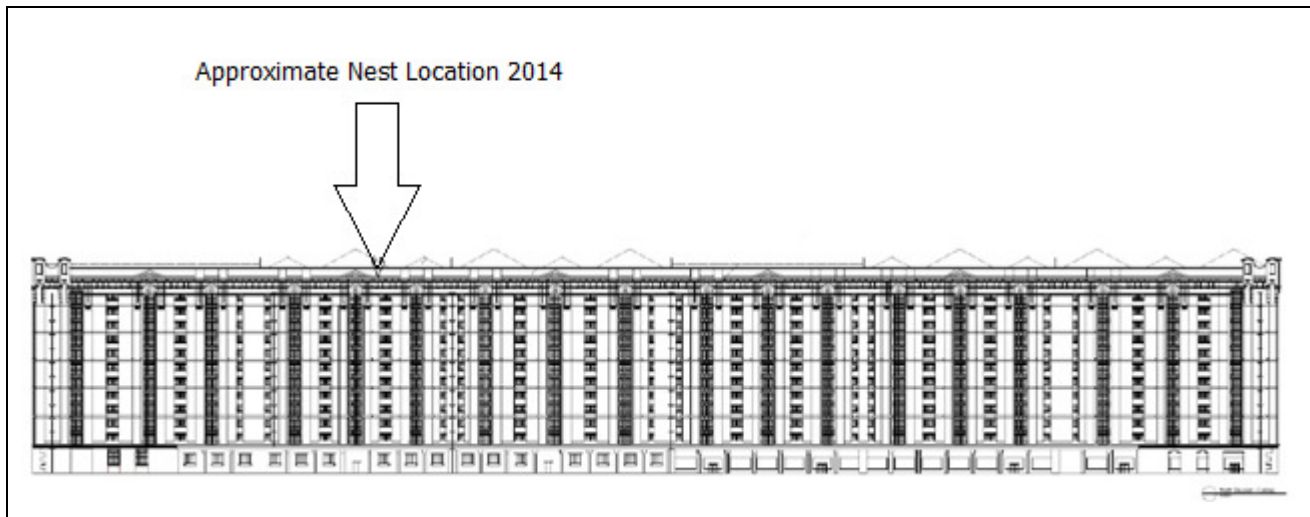


Previous Surveys

2013 - 2014 WYG Surveys of Adjacent Docklands

WYG undertook extensive wintering and passage bird surveys within the North Liverpool Docklands immediately to the west of the site during 2013 -2014. During the Spring of 2014, nesting peregrines were observed on the north face of the Tobacco Warehouse (nesting in location number 3 -see Figure 2 below) and were regularly observed in the Docklands to the west of the Tobacco Warehouse site.

Figure 2 – 2014 Peregrine Nesting Location



During the January 2014 wintering bird survey, black redstart was recorded in song in the Collingwood Dock area immediately to the west of the Tobacco Warehouse site.

Stanley Dock Environmental Statement 2007

Peregrine surveys were carried out on site by Martin Sutherland during 2004, the full results of which are provided in Section 13 of the Stanley Dock Environmental Statement. During these surveys, peregrines were confirmed to have nested on the northern façade of the Tobacco Warehouse.

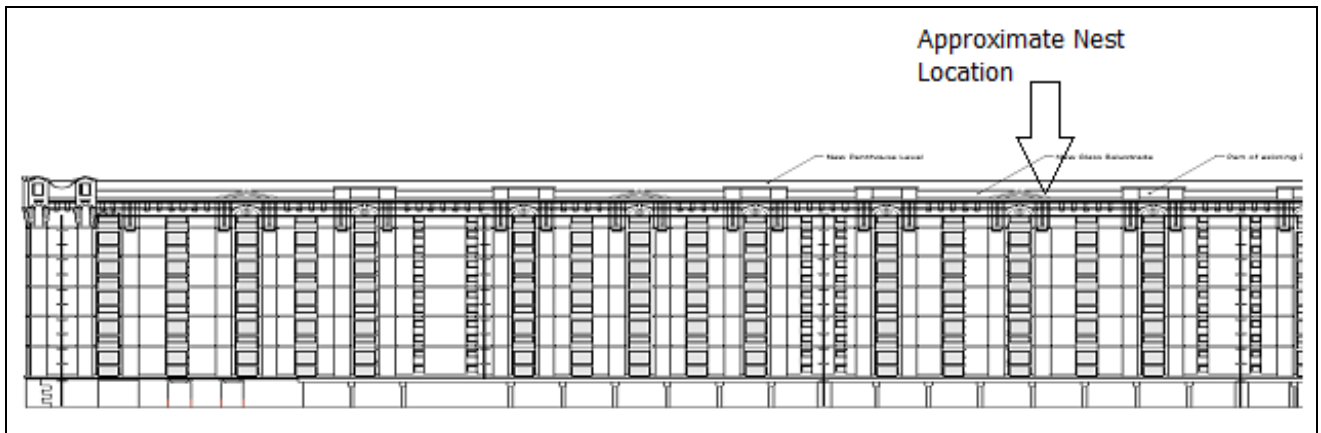
A summary of the 2004 findings are provided below:

"Five survey visits were conducted between 30th March and 21st July 2004. The first visit, on 30th-31st March, found that the pair was present at the site although no nest was found. The following visit, on 28th April, located the nest. This was on the top ledge of the northern façade of the building. It was cited on the south side of the third (from the north) of six brick 'eaves-like' structures which are evenly spaced, presumably as ornament, along the top ledge. The birds were still present feeding small young on the 17th May visit while on 21st June the adults were present with at least two fledged juveniles. One of these was on the top ledge north of the nest site and at least one other was in an iron structure three quarters up the face of the building just south of the north-eastern most external staircase. The final visit on 21st July found no sign of continued peregrine presence and the birds were concluded to have left the site."

Sutherland, M. (2007) Stanley Dock: Environmental Statement Volume 1. Ch.13, pg 6.

Figure 3 provides the approximate nest location recorded during the 2004 nesting peregrine surveys on site.

Figure 3 – 2004 Peregrine nesting location



The 2004 surveys also made the following observations with regard to black redstart:

"It is understood that black redstarts (Phoenicurus ochrurus) bred at the former power station site at the Central Docks development site (about 100 m south west of the Site) until about 1998, and that singing males have been understood to have been reported at various places within the docks. The species was not noted during the observations made of peregrines but it is a species that can appear at sites when conditions are right. The extent of wasteland associated with the former docks is substantial, and the possibility of the species occurring in the area would not be inconceivable."





Sutherland, M. (2007) Stanley Dock: Environmental Statement Volume 1. Ch.13, pg 8.

Therefore, whilst black redstart was not observed on site during the 2004 nesting peregrine survey, it has been noted that the species could potentially utilise the site for nesting purposes.

4.2.2 Building Inspection Results

The results of the building inspection for peregrines are presented in table 1 below which references locations on figures 4 and 5 which are provided below table 1 for ease of reference.

Table 1. Building Inspection Results

Location number	Feature description	Feature Usage	Photograph of feature
1	Feathers and staining on 13 th floor ledge and staining below, 0.75 metres east of the fourth (from the east) triangular eave-like structure.	Potential nesting location / regular plucking location.	
2	Feathers and staining on 13 th floor ledge, approximately four metres east of location 1.	Potential nesting location / regular plucking location.	
3	Downy feathers on 13 th floor ledge, and extensive staining below, ten metres to the east of the third (from the east) triangular eave-like structure.	Potential nesting location / regular plucking location.	
4	Large amount of droppings and feathers on the 13 th floor ledge, 0.5 metres east of the third (from the east) triangular eave-like structure, male bird observed on feature.	Potential nest site / regular plucking location.	


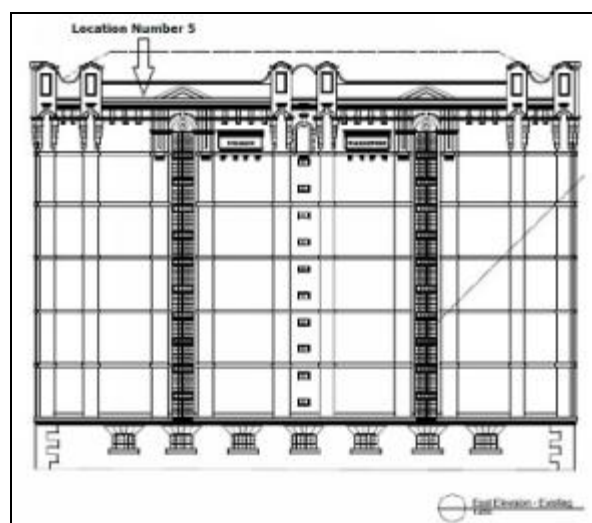
Location number	Feature description	Feature Usage	Photograph of feature
5	Large amount of droppings and feathers 1 metre south of the first (from the south) triangular eave-like structure. Large amounts of downy feathers on 13 th floor ledge (see photo), heavy and fresh droppings on pavement below and pigeon remains below the location.	Suspected 2015 nest site	

Figure 4 – Tobacco Warehouse Northern Face Potential 2015 Peregrine nest sites



Figure 5 - Tobacco Warehouse Eastern Face Suspected 2015 Peregrine nest site





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4.2.3 Peregrine Survey Results

16th June 2015

Two adults and a juvenile capable of flight were recorded during the survey with the first record being a male perched on the eastern face of the building at 8.00, and the last record relating to a juvenile again on the eastern face of the building at 11.00. A specific nest location was not in use at the time of survey; however, a location on the eastern face of the building was suspected to have been the nest location and looked as if it was still regularly used. A number of preferred roosting / feeding locations were also present on the building. The juvenile was recorded to leave the site towards the River Mersey to the west on large practice flights. The juvenile bird was still reliant on adult birds for food and therefore was not fully fledged.

Table 2 - Peregrine Survey Record Sheet 16th June 2015

Peregrine Survey Record Sheet			
Site	Tobacco Warehouse, Liverpool	Date	16.06.15
Survey Type	Vantage Point	Surveyor	DF
Location	Vantage Point 1 & 2	Duration of survey	8.00 – 11.00
Weather Conditions	Temperature	Cloud Cover	Wind
	15.5°C	25%	Light south-westerly
Additional Notes			
Peregrines observed to be comfortable with human presence, as members of the public and heavy traffic were regularly passing by below perched peregrines.			
Time	Species	Age / Sex	Observations
08.00 - 08.05	Peregrine	Male	Perched on small decorative brick ledge at 12 th floor height on the eastern face of the building. Flew north-west over Stanley Dock.
09.00 – 09.27	Peregrine	Female and juvenile	Female (holding prey) and juvenile flew in from the west and landed in location 2, juvenile bird was heard constantly calling to female for food.
09.27 – 09.34	Peregrine	Female and juvenile	Female flew to the stairwell below location 1 (tenth floor) and dropped prey (feral pigeon) and then flew to location 2. The juvenile bird then flew from location 2 to the stairwell to feed on prey.
09.25	Peregrine	Male	Flew in from the west with prey and landed at location 4 and left prey item.



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09.27	Peregrine	Male	Perched on old pipes just to the west of location 4.
09.35	Peregrine	Female and juvenile	Both birds flew west towards the River Mersey and out of sight.
10.00 – 11.00	Peregrine	Male	Flew to eastern face of the building and perched on location 5.
10.31 – 10.34	Peregrine	Female and juvenile	Female and juvenile flew from the south-west to the eastern face of the building to location 5.
10.35 – 11.00	Peregrine	Female	Left the eastern face of the building and flew west over Stanley Dock. Juvenile bird remained at location 5 for the remainder of the survey, calling constantly

23rd June 2015

Both adult birds and the juvenile were recorded during the survey, with the first record relating to a female and juvenile at 09.20 hunting to the south of the site. This behaviour was observed twice during the survey and it is considered that the juvenile bird was accompanying the female to practice / learn hunting techniques; the juvenile bird itself was not recorded hunting. A third adult peregrine was observed distantly to the east of the site and was driven off by the female bird. The last record was of the juvenile bird at the suspected nest site at 11.00. The juvenile bird was still reliant on the adult birds for food and regularly returned to the suspected nest site; it was, therefore, not fully fledged at the time.

Table 3 - Peregrine Survey Record Sheet 23rd June 2015

Peregrine Survey Record Sheet			
Site	Tobacco Warehouse, Liverpool	Date	23.06.15
Survey Type	Vantage Point	Surveyor	DF
Location	Vantage Point 1 & 2	Duration of survey	8.00 – 11.00
Weather Conditions	Temperature	Cloud Cover	Wind
	16°C	80%	Light south-westerly
Additional Notes			
Juvenile now observed taking regular flights without female.			
Time	Species	Age / Sex	Observations



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09.20 – 09.23	Peregrine	Female, male and juvenile	Female and juvenile flew in from the west to the south of the site and hunted feral pigeons over the Bonded Tea Warehouse - female caught a pigeon and flew past the suspected nest site on the east face of the building, closely followed by the juvenile and then west towards Stanley dock, she then lost the pigeon over White Omkins and Courage Grain Silo. The juvenile then briefly perched on the 2nd stairwell on the northern face, the male bird circled over Stanley dock calling and all three birds flew west towards the River Mersey.
09.50	Peregrine	Female and juvenile	Female and juvenile flew into the suspected nest site on the eastern face of the building.
09.55	Peregrine	Female	Female left the suspected nest site on the eastern face of the building and headed west.
09.55 – 10.05	Peregrine	Juvenile	Began to make regular flights (calling constantly) to the east of the site.
10.05	Peregrine	Male and juvenile	Returned to the suspected nest site on the eastern face of the building carrying prey, it left prey (un-plucked) on nesting ledge and perched 15 metres to north, juvenile bird continued to make regular flights and calling to adult bird.
10.10 – 10.14	Peregrine	Juvenile	Juvenile bird left the suspected nest site on the eastern face of the building and headed to location 3, then to the 2nd stairwell and by 10.14 around to western gable end and out of sight.
10.20 – 10.33	Peregrine	Female and juvenile (and third bird not from this site)	At 10.20 an adult and juvenile were again hunting over the Bonded Tea Warehouse to the south of the site, then flew to the east of the site and circled, at 10.25 a 3rd bird appeared from the east, and the juvenile flew straight back to the suspected nest site and the female drove the 3rd bird off distantly to the east; this was obviously not a bird from this nest site.
10.34 – 10.37	Peregrine	Juvenile	At 10.34 the juvenile left the nest site and flew along the northern face of the building, heading over the rooftop approximately 2/3 of the way along, it repeated this flight along the north face at 10.37.
10.40 – 11.00	Peregrine	Juvenile	Flew back to the suspected nest site and remained there until the end of the survey period.

4.2.4 Secondary Species

No black redstarts were recorded during the nesting peregrine surveys; however, a male bird was heard in song in Clarence Graving Dock area immediately west of Regent Road (which is immediately west of the site boundary) on the evening of the 22nd June 2015 prior to a bat emergence survey on site.

This area represents suitable habitat for nesting black redstart and, therefore, black redstart could potentially utilise the site for foraging purposes or nesting in future years.

4.3 Bat survey

4.3.1 Building inspections

A summary of the external and internal inspections is provided below for the building (refer to Appendix C for full building inspection results):

External Inspection

In general the brickwork was considered to be in fair condition. Holes in the brick walls exist where bricks have been removed or fallen out and where mortar has fallen away, especially around pipes and other features such as where gullies appear to have been / are attached (Photographs 13 and 14). These holes potentially provide access to crawl and roost spaces within the wall cavities.



Photograph 13. Hole in brickwork where bricks have been removed.



Photograph 14. Hole in brickwork where utility cable / pipe once entered wall cavity.

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Butterfly bush *Buddleja davidii* shrubs have also rooted and grown out from ledges including the window sills towards the top of the building (9th floor upwards) and are considered likely to have pulled apart adjacent bricks and caused mortar to have disintegrated (Photograph 15).



Photograph 15. Butterfly bush rooted in ledge on southern aspect of building.

A doorway, presumably providing former access to internal office spaces, is present at the southeast corner of the building. Gaps around the doorway are smoother and devoid of cobwebs and, therefore, are potential entry points used by bats into the building. Lifted lead flashing was also recorded where the pedestrian overpasses from South Warehouse attach to the building (Photograph 16). Many of the window frames were damaged, in-filled or missing. Gaps exist around these frames and around areas of infilling work. Many of the decorative tiles around the edge of the building were either missing or lifted. Mortar in these areas may have also disintegrated; however, due to the height of these features this could not be confirmed.



Photograph 16. Overpass between South Warehouse and the building.

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No evidence of bat activity (e.g. bat droppings, scratches) was recorded around the periphery of the building.

Internal inspection

During the internal inspection, it was noted that all floors could potentially be accessed by bats via smashed / missing window panes. The ground floor could also be accessed via the permanently open loading bays and the basement via the permanently open access slope. Multiple crevices and holes were recorded along the internal brick walls especially on the ground and 13th floors providing potential access to crawl and roost spaces within wall cavities (Photographs 17 and 18).



Photograph 17. Hole in brick wall on ground floor



Photograph 18. Exposed wall cavity in brick wall on ground floor

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Bats could also potentially access the lift shafts because the lift doors were fixed open (Photograph 19) allowing bats to fly down / up to areas of missing / damaged brickwork.



Photograph 19. Lift shaft

Within the basement, multiple cracks were recorded within the brick walls around the alcoves and in many cases lacking cobwebs across the gaps (Photograph 20). Two areas of crushed brick / debris were recorded, one on the fourth floor and the second on the ceiling of the basement (Photographs 21 and 22). These two areas may provide bats with access to crawl and cavity spaces suitable for a range of roosting needs.



Photograph 20. Crack along brick wall within alcove in basement



Photograph 21. Pile of bricks / debris on fourth floor



Photograph 22. Bricks / debris used to repair / fill hole in ceiling of basement.

The general condition within the basement was damp but without draughts or significant areas of temperature change. The general conditions within the ground floor was dry but with draughts and likely to undergo significant areas of temperature change as a result of the open northern aspect. The general condition of the 13th floor was dry but likely to become wet and undergo significant areas of temperature change as a result of large sections of open roof.

No evidence of bat activity (e.g. bat droppings, scratches) was recorded within the internal spaces.



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4.3.2 Emergence and re-entry surveys

The dates and conditions for each survey are summarised in Table 4. Full survey results are presented in Appendix D.

Table 4. Survey dates and conditions

Date	Sunrise (SR) / Sunset (SS) time	Survey start time	Survey finish time	Starting temperature (°C)	Starting cloud cover (%)	Wind
22.06.15	21.44 (SS)	21.14	23.45	13.8°C	80%	Light, westerly breeze
26.06.15	04.44 (SR)	03.14	05.00	16°C	80%	Still
30.06.15	21.43 (SS)	21.14	23.45	24°C	5%	Slight breeze

Dusk Emergence: 22nd June 2015

At 21.45 (1 minute after sunset), two common pipistrelle bats were observed in the 'alley' between Tobacco Warehouse and the adjacent South Warehouse. It is considered that these two bats originated from the southern aspect of Tobacco Warehouse; however, their point of emergence was not confirmed.

At 21.55 (11 minutes after sunset), a total of three common pipistrelle bats were observed flying east to west along the 'alley'. The location of the third bats emergence was not confirmed either.

At 21.57, a common pipistrelle was observed to emerge from the last loading bay at the north eastern corner of the Tobacco Warehouse.

At 22.06, a common pipistrelle was observed to emerge from a 3rd floor window on the southern aspect of the Tobacco Warehouse, approximately halfway along the building's length.

At 22.07, a common pipistrelle was observed to emerge from the last loading bay at the north eastern corner of the Tobacco Warehouse.

At 22.06, a common pipistrelle was observed to emerge from a 3rd floor window on the western gable end of the Tobacco Warehouse.



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The maximum number of bats observed together at any one time during the survey was three common pipistrelles. Bats were noted to forage in the sheltered area between the Tobacco Warehouse and the South warehouse and over the outgrowing butterfly bushes along the top floor. Bats were also observed to 'weave' between open areas of the building, flying in one open doorway and then out of another.

In total, four common pipistrelle bats were confirmed to have emerged from the Tobacco Warehouse with a further three common pipistrelles suspected to have originated from either the Tobacco Warehouse or the South warehouse.

Dawn Re-entry: 26th June 2015

Bat activity was observed at the start of the survey (03.14) as occasional feeding buzzes and passes. Activity increased in regularity from 03.40 when up to three common pipistrelle bats were observed together in the alley between Tobacco Warehouse and South Warehouse and up to three common pipistrelles were observed foraging over the north east corner of the building.

At 04.34 (sunrise at 04.44), one common pipistrelle was observed to enter a roost site via a 3rd floor window mid way along the length of the southern aspect of Tobacco Warehouse (approximate same location as emergence noted on 22nd June 2015).

At 04.21, three common pipistrelle bats were observed together, two entered a roost feature on the ground floor of north east corner of the building and the third returned to a roost site on the 12th floor at approximately the same orientation.

During the survey, bats were observed to fly in and out of the building and to forage over butterfly bush along the southern rooftop.

Dusk Emergence 30th June 2015

At 21.45 (two minutes after sunset), three common pipistrelle bats emerged from a 3rd floor window on the southern aspect of Tobacco Warehouse. This location was noted to be further east than that previously recorded on the same floor.

At 22.08, a common pipistrelle was observed suddenly in the alley and it was not confirmed where this bat had originated from.



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At 22.16, 22.17 and 22.18, three common pipistrelle bats (one each minute) were recorded to emerge from the last loading bay on the ground floor to the north east corner and from a 2nd floor window along the northern aspect of the building.

As with the first emergence surveys, bats were observed to forage in sheltered places and over butterfly bush. Bat foraging activity was also noted over open water at Stanley Dock.

In total, six common pipistrelle bats were confirmed to have emerged from the Tobacco Warehouse.



5.0 Ecological impacts, discussion and recommendations

5.1 Peregrine

During the survey, it was confirmed that peregrine had successfully nested on site and a juvenile bird was in the process of fledging. Due to the time constraints of the surveys (only conducted from mid-June onwards) it was not possible to confirm the exact location of the nest site; however, due to the juvenile bird's preference for location 5 on the eastern face of the building (see figure 5 above) and the amount of droppings and food remains below the location, it is considered that this the most likely nesting location during the 2015 season.

It was noted during the survey that the peregrines were accustomed to a reasonable amount of disturbance with pedestrians and heavy traffic regularly passing below location 5. However, unmitigated disturbance due to development activity will likely cause **significant disturbance** to the birds. It is likely that the most notable disturbance will result from the creation of the internal void of the building and the construction of the internal car parks and dwellings, and the removal / construction of roof structures and repairs to the external shell of the building.

In order to avoid a breach in legislation, it is essential that all works within areas occupied by peregrine (most notably the northern and eastern faces of the building) and other areas that will cause considerable disturbance to nesting peregrines, are carried out in the months outside of the breeding season (August – February).

All wild birds in the UK are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Peregrine (and black redstart) are species listed in Schedule 1 of the 1981 Act (as amended) receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird. Therefore efforts must be maintained to prevent disturbance to these nesting birds. Failure to ensure that nesting Schedule 1 birds are not impacted may result in considerable penalties.

All scheduled 2015 works on site may continue once it has been confirmed that the juvenile peregrine has successfully fledged. Further works post February 2016 should be informed by a further detailed peregrine survey on site. Further survey will provide information to aid in the



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prevention of disturbance to nesting peregrine on site; survey efforts will also continue to monitor the potential presence of black redstart on site to inform appropriate mitigation as necessary.

It has been established through the survey effort and previous surveys on site, that peregrine have nested on a number of locations on the decorative ledge along the top of the building (northern and eastern faces); however it is not guaranteed that they will utilise the same nest site during the 2016 nesting period.

Any works that are considered potentially disturbing to nesting peregrines during future nesting periods (e.g. March – July 2016) should be overseen by a watching brief who will liaise with the site manager regarding scheduled works on site and the potential provision of measures that will reduce the risk of disturbing nesting peregrine on site.

It is noted from the review of the ES addendum that a detailed mitigation strategy for peregrine has previously been developed which includes retention of the decorative ledge used by peregrines therefore ensuring the continuity of availability of a traditional nesting feature on site. It is considered that this strategy is appropriate and it is recommended that this be adopted for future development of the site (see table 5).

The ES addendum also details scheme modifications which it is considered would be highly beneficial to the peregrines and it is, therefore, recommended that these modifications be incorporated in the final layout.

"The eastern end roof-top layout of the Tobacco Warehouse has been modified to eliminate two penthouse apartments, creating a void volume where the apartments would have been; this void space is being considered as an additional location for bat mitigation. The upper level would be blocked off from the penthouse apartments on the north side of the Tobacco Warehouse. The southern rooftop garden would also be landscaped as 'brown roof'. The objective of this modification is to create an exclusion area that is subjected to a lower level of human interference at this end of the Development. The boundary landscape treatment will include planting (e.g. Coleus canina at boundaries) and/or fencing to clearly delineate the area for people and exclude feral or other mammals, with additional buffer planting. In addition to the modification of the roof-top area at the eastern end of the Tobacco Warehouse, one of the fire escape structures at the eastern end of the north façade is to be retained. This is in part to meet issues related to built heritage, but would also retain a currently roosting location that is currently used by peregrines".

Table 5 Peregrine Construction Mitigation Strategy



Tobacco Warehouse – Bat and Peregrine Surveys 2015

Construction/Demolition Activity	Proposed Phase/time-scale (to be confirmed)	Mitigation Strategy Response
Demolition of Tobacco Warehouse roofs	Year 1-2	<p>Roof demolition to be undertaken in October-early March period of year 1 to prevent damage to nesting sites, and also avoid potential for effects on possible bat roosts.</p> <p>A watching brief will be maintained to assess when birds nest. British Trust for Ornithology data indicate that first clutches are laid on average 6 Apr (23 Mar - 28 Apr).</p>
Demolition of internal space to create void	Year 1-2	<p>These works would be undertaken to the east of the future North Eastern lift shaft only during the mid-August -September –early March period (start to be determined based on watching brief for birds).</p> <p>Work to the west would be visually better screened acoustically and visually and could be undertaken with reduced seasonal constraint (subject to watching brief).</p>
Completion of flat green roof of North Warehouse	Year 2	<p>Temporary brown roof habitat (gravel-based) treatment to provide potential alternative (but suboptimal due to height and orientation) nesting location in the event that disturbance by works at Tobacco Warehouse prevents pair nesting.</p> <p>Provide nest boxes, according to recommendations set out at http://www.raptorresource.org/build.htm and Dixon and Shawler13.</p> <p>These would be shallow box structures to give some shading, provided with drainage and a layer of 8-10 cm of fine pea gravel. If used as a nest, waste (e.g. mummified prey carcasses to be removed following fledging).</p>
Construction of penthouse apartment structures and structure (formed by 2 deleted apartments) within Peregrine zone at the eastern end of the warehouse	Year 2-3	<p>Works to be undertaken between September and March in year 2 to prepare the peregrine zone for use by nesting birds. This would create a secluded area on the eastern ledge, with the external structure of the formerly proposed apartments forming a noise and visual barrier to the works carried out in the interior of the warehouse.</p> <p>The completion of the upper level structural works at the same time would aid this separation from future works in the internal space to create the new structure in the internal void.</p> <p>Potential nesting sites to be provided with shallow ledges on ground and within structure, with lips, drainage and pea gravel substrate (8-10cm).</p> <p>Maintain alternative site at North Warehouse subject to a watching brief. If this shows no use, the final landscape scheme should be implemented – this could be a brown roof form.</p>
Formation of internal structure in void	Year 3-4	<p>These works should be possible to undertake at any time of the year. These will take place at low level from ground, 35m lower than peregrine nesting zone on eastern ledge and to the rear of the effective noise/visual barrier to the rear constructed in 3 above.</p>



Tobacco Warehouse – Bat and Peregrine Surveys 2015

Construction/Demolition Activity	Proposed Phase/time-scale (to be confirmed)	Mitigation Strategy Response
		The male could become aware of works when roosting at high level. Piling works –the noisiest -to be undertaken between August and March. Watching brief maintained throughout, with strict exclusion of works, except in emergencies, at roof level from mid-March to early August periods.
Fitting out and refurbishment	final Year 4-5	The fitting out of the upper level apartments and landscaping works for the green roofs would be restricted during the breeding season (March–August) in areas east of the north eastern lift shaft. All other works may be undertaken without restriction.

The implementation of the mitigation strategy for the construction phase would be undertaken within the framework of the Construction Environmental Management Plan (CEMP). The works would be monitored as follows:

- Establishment of a watching brief to oversee terms of mitigation are appropriately implemented and to respond flexibly to modifications (if necessary) to observations made on-site during works;
- Monthly observations of the nesting site to record use and also number of fledglings until the nest is left, for full construction period (nest monitoring would only be considered by remote video-cam methods under appropriate licence).

Following the completion of the development, continued monitoring based on annual survey visits is recommended to determine success of measures and inform amendments to mitigation if necessary. If appropriate, a remote video-cam could be installed, which could transmit within the development however it is recommended that the location of the nest be kept confidential to avoid potential issues of persecution. Monitoring and maintenance should be undertaken to prevent potential mammal predators entering the peregrine zone. Annual cleaning of the nest location to remove detritus should be undertaken in accordance with recommendations set out in the advisory notes by Dixon and Shawler and <http://www.raptorresource.org/build.htm>.



5.2 Bats

All bats and their roosts receive full protection both under the Wildlife and Countryside Act 1981 (as amended), and in Schedule 2 of the Conservation of Habitats and Species Regulations 2012 (as amended) as European protected species. The provisions of the NERC Act 2006 require local authorities to have due regard to protected species when determining planning applications, including bat species.

The surveys confirmed that at least six bats use the Tobacco Warehouse on a regular basis as a roosting site. Confidence in this assessment is derived from the observations made and the times at which bat activity was recorded i.e. minutes after sunset and minutes before sunrise.

The previous survey in 2011 stated that the roost was a “small maternity roost”. It is considered that this could possibly still be the case, with the six bats alternating their roosting location according to requirements i.e. physical (such as temperature) or social. It is also considered that by moving around the building and making use of the many suitable roosting features available that the bats are able to reduce the risk of communal diseases and parasites.

The mitigation proposed in the 2011 ES addendum states that mitigation will comprise “*installation of Schwegler 2FR bat tubes in sets of five on the inner faces of the four lift shafts of the refurbished Tobacco Warehouse and that a new void roof-top structure to be created with the elimination of two apartments to provide a ‘brown-roof’ area [for peregrines] has an internal area which has potential for provision of additional bat roosting space*”.

It is considered that this approach would be suitable; however, it is also recommended that measures be undertaken to incorporate roosting features to the outwardfacing southern and north eastern aspects at approximate heights of 2nd, 3rd, 4th and 12th floor as these are the heights and aspects which have been confirmed as favourable to the bats on site. It is considered that the installation of boxes at the inward facing lift shafts is provision of additional roosting features rather than replacement.

A sensitive lighting scheme will also be required to minimise any impact of lighting upon suitable roosting and foraging areas for bats. It is recommended that any lighting between the Tobacco Warehouse and the South warehouse be directed below the 2nd floor with minimal light spill above this as bats were observed to forage and commute above this height.



A European Protected Species (EPS) licence will be required from Natural England to permit any works affecting a bat roost(s).

5.3 Licensing

The species protection provisions of the Habitats Directive, as implemented by the Conservation of Habitats and Species Regulations 2012 (as amended), contain three "derogation tests" which must be considered prior to granting planning permission and again by Natural England when deciding whether to grant a licence to a person carrying out an activity which would harm a EPS such as bats. For development activities this licence is normally obtained after planning permission has been obtained. The three tests are that:

- The activity to be licensed must be for imperative reasons of overriding public interest;
- There must be no satisfactory alternative; and
- The favourable conservation status of the species must be maintained.

5.3.1 Imperative Reason of Overriding Public Interest

The 'imperative reason of overriding public interest' in this case is considered likely to be that the Local Planning Authority has a requirement to provide additional housing and re-development in the area.

5.3.2 No Satisfactory Alternative

Similarly for the 'no satisfactory alternative' test, there is a legal requirement to provide additional housing in the area. Within any licence application it will be necessary to justify the choice of the site for development.

5.3.3 Favourable Conservation Status

A derogation of the Conservation of Habitats and Species Regulations 2012 (as amended) (i.e. action permitted under an EPS licence that would otherwise be unlawful) must not be "*detrimental to the maintenance of the populations of the species concerned at a favourable conservation status in their natural range*" (European Commission 2007).

Without mitigation, the loss of roosting features at the Tobacco Warehouse would result in the loss of a small maternity roost for at least six common pipistrelle bats. The loss of such a site is unlikely to be

significant to the favourable conservation status of the species; however, roost sites such as this one are still important to common pipistrelle conservation and population dynamics (in particular in the highly urbanised area of the warehouse). Therefore, mitigation will be required to reduce the risk of contributing to wider scale cumulative impacts to the conservation status of common pipistrelle bats in Liverpool.

With the provision of mitigation and enhancement (as outlined in the following sections), it is anticipated that the common pipistrelle population as observed during the surveys would remain constant. In terms of long term mitigation and enhancement, it is considered that good quality mitigation would allow for an increased number of common pipistrelle bats to use the area and therefore the conservation status of this species in the wider area could be significantly enhanced.

5.4 Recommended Mitigation Measures

Potential mitigation and enhancement options will be finalised within a detailed Method Statement to support an EPS licence application and will likely include:

- Sensitive soft-strip/ repair of suitable roosting features under supervision / following watching brief of a licensed bat ecologist under Natural England EPS licence;
- The provision of alternative roosting facilities for the bats, such as bat boxes / bat bricks / bat houses (to be confirmed through consultation with Natural England);
- Prior to any works starting, all contractors will be made aware (by means of a tool box talk) of the risk of bats being present within working areas, of their legally protected status, of the working methods to be adhered to, and the appropriate course of action to be taken if bats are found in an unexpected location;
- No removal of roof coverings, including tiles, flashing, soffit boxes and fascia boards, will be carried out unless a licensed bat worker is present on site and supervising the soft working techniques;
- The brown roof will include species known to attract night flying insects and so increase the quality of the foraging habitat for bats;
- A sensitive lighting scheme should be produced to minimise any impact of lighting upon suitable roosting and foraging areas for bats;



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- Works at night should be avoided to avoid causing disturbance to foraging and / or commuting bats on site.



6.0 References

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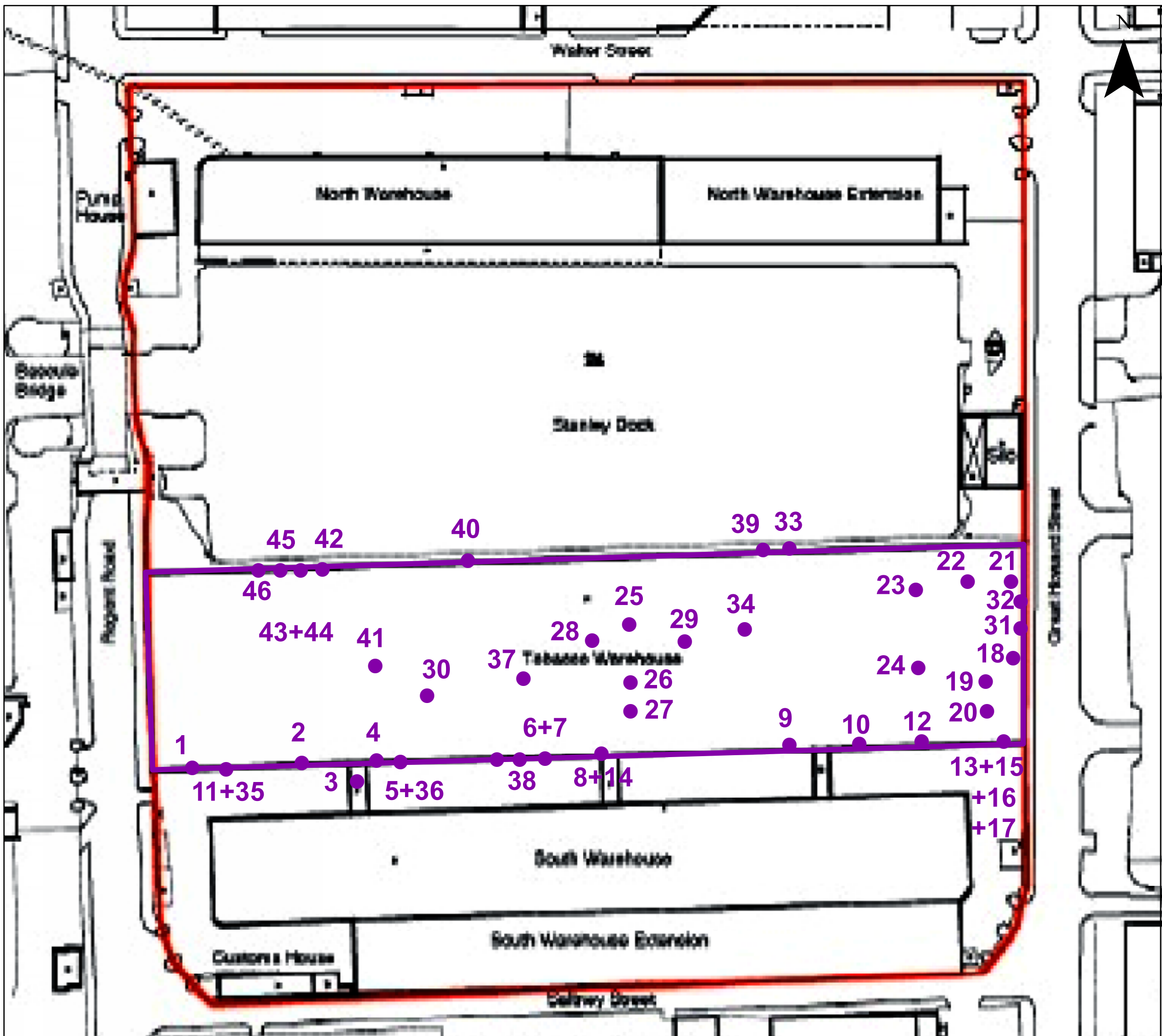
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Appendix A – Site Location



Appendix B – Building Inspection Results



Legend

- Tabacco Warehouse outltine
- Building inspection note location
- 1 - 46 Building inspection note

Quay West at MediaCityUK
Trafford Wharf Road
Trafford Park
Manchester
M17 1HH

Tel: 0161 872 3223
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Environment

Project
Tobacco Warehouse

Drawing Title:
Building inspection results - June 2015

Drawn by:	Date:	Checked By:	Date:	Approved By:	Date:
GW	20.06.15		DATE		DATE
Project No:	Office	Type	Drawing No.	Revision:	
A093000	45	94	PLAN #		



Note #	Feature description
General	External Pulley's have holes in the brickwork where they attach to the building.
General	External All access hatches have wooden beams above. At least 50% of these beams are rotted away with splits and gaps visible.
General	External Butterfly bush saplings / immature shrubs have rooted between brickwork at approximately 9 th floor and above - particularly around window sills and ledges. The roots may have pushed the brickwork apparent to produce gaps – too high to inspect.
General	External Top tiles along decorative edge around periphery of building have fallen away. Gaps may exist in these areas particularly if the mortar has also disintegrated.
General	Internal There are six lift shafts in total all with possible features. One shaft was inspected - see note 28
General	Internal Pigeons breeding on 12 th floor.
General	External Field tiles missing and lifted on roof. Gaps leading underneath visible. This feature is repeated across the hip shaped roofs.
General	External / internal Holes in roof where tiles and timber frame has collapsed / been removed.
General	Internal / external Multiple turrets along ridges of roof may have similar features as the one inspects – see note 33
General	External Missing mortar in brickwork on west facing end of building.
General	External Loose brickwork and missing mortar above upper ledges.
General	External Peregrine falcons nesting on roof. Confirmed.
1	External Cavity in brickwork – ex-utility cable / pipe hole.
2	External Gaps in brickwork
3	External Lifted lead tiles on building above bridge and holes in the brickwork.
4	External Holes in brickwork
5	External Hole in brickwork where window frame has fallen out.
6	External Hole in brickwork where drainage pipe once secured at third floor height.
7	External Hole in brickwork



Note #	Feature description
8	External Lifted lead flashing – attaching bridge to building
8	External Brick removed at third floor height.
9	External Small gap under window sill tile containing roots.
10	External Window has been bricked up at 10 th floor height and there are exposed gaps in the old brickwork to the left which appears to have gaps.
11	External Holes under decorative ledge.
12	External Gap in brickwork where wooden timber has rotted.
13	External Abandoned bird nests – considered likely to be feral pigeon.
14	External Abandoned bird nests – considered likely to be feral pigeon.
15	External Gap between decorative arch and brickwork.
16	External Old iron door with 1.5inch gap around upper left and right corners and above door. The 1inch gap to the right of the door has no cobwebs and is smoothed.
17	External 4inch hole in iron grill on building. Cobwebs present.
18	Internal 10inch gap in brickwork at end of room. No cobwebs. The hole continues straight through the wall and is visible on opposite side of wall however may provide access to wall cavity.
19	Internal 2inch gap between supporting pillar and brickwork. Goes deep with no cobwebs.
20	Internal 1-2inch gap in wall cavity. No cobwebs. Goes at least 2foot if not deeper.
21	Internal 10inch gap in brickwork at end of room. No cobwebs. The hole continues straight through the wall and is visible on opposite side of wall however may provide access to wall cavity.
22	Internal 4inch hole in hollow brickwork. Noticeably no cobwebs.
23	Internal Abandoned mistle thrush nest.
24	Internal Holes above brick wall. Possible access to cavity space.
25	Internal 10inch gap in brickwork for pipes. Possible access to cavity space.
26	Internal Crevice above plaster board around doorway.
27	Internal



Note #	Feature description
	10inch gap in brickwork for pipes. Possible access to cavity space.
28	Internal Green painted wall – two holes in brickwork. May be connecting and lead to cavity.
29	Internal Lift shaft – at least 9 bricks missing within shaft.
30	Internal Large (15 x 10m, 4m high) rubble pile. Potential crawl and roots spaces with pile.
31	Internal Timber lintl supporting wooden roofing slats and steel lintl has gaps leading behind and gaps in brickwork at multiple places along eastern end of building.
32	External Holes in brickwork above roof on outside of building.
33	Internal Multiple gaps in brickwork of northern wall below roofing timbers.
34	Internal / external Turret on ridge of roof has clear access points (8uinch holes) leading into the internal turret space. Potential roost opportunity.
35	Internal Alcove in basement with clear 2inch gap at the back approximately 40-50cm long. The gap is clear of cobwebs.
36	Internal 10inch gap in brickwork – no cobwebs. Potential crawl spaces.
37	Internal Clear hole in brickwork leading to wall cavity.
38	Internal Crack in brickwork under alcove.
39	Internal Concrete beam cracked. Leading to crawl space.
40	Internal Concrete beam cracked. Leading to crawl space.
41	Internal Steel plate used as repair work with clear gap in brickwork surrounding it.
42	Internal 3inch Gap between concrete supporting beam and brickwork leading to clear crawl space.
43	Internal Crack in brickwork under alcove is free of cobwebs.
44	Internal Crack in brickwork under alcove is free of cobwebs.
45	Internal 3inch Gap between concrete supporting beam and brickwork leading to clear crawl space
46	Internal Crack in brickwork under alcove is free of cobwebs








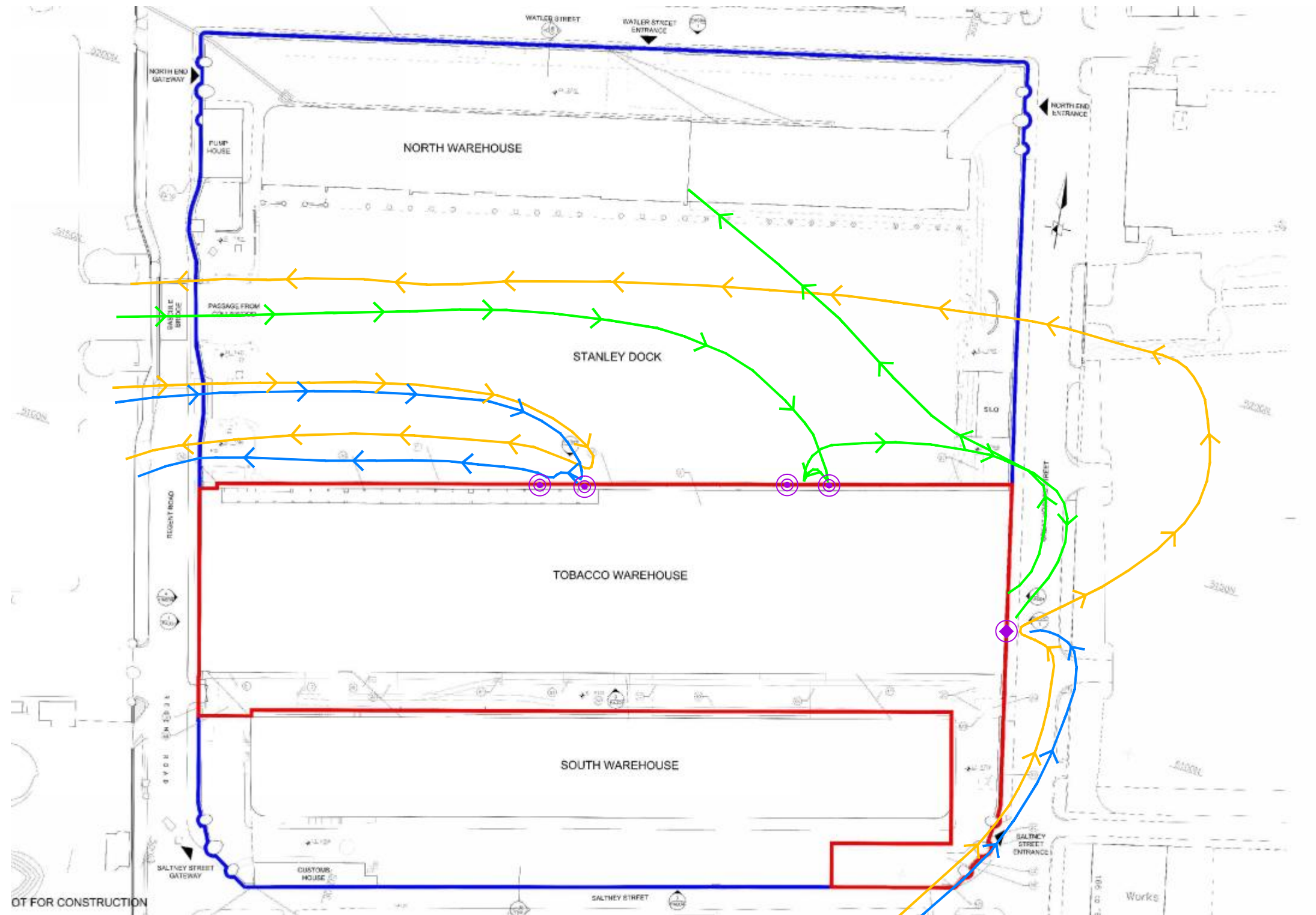
Appendix C – Peregrine Survey Results



DO NOT SCALE: CONTRACTOR TO CHECK ALL DIMENSIONS AND
REPORT ANY OMISSIONS OR ERRORS

KEY

-  MALE PEREGRINE FLIGHT LINE
-  FEMALE PEREGRINE FLIGHT LINE
-  JUVENILE PEREGRINE FLIGHT LINE
-  SUSPECTED PEREGRINE NEST
-  POTENTIAL PEREGRINE NEST



REV	DESCRIPTION	BY	CHK	APP	DATE
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Client:

HARCOURT CONSTRUCTION (NI) LTD

ARNDAL COURT
HEADINGLEY
LEEDS
LS6 2UJ

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FAX: +44 (0)113 275 0623
e-mail: enviro@wyg.com



Project: A093000

STANLEY DOCK TOBACCO WAREHOUSE

Drawing Title:

PEREGRINE SURVEY 16th JUNE 2015 8:00 - 11:00

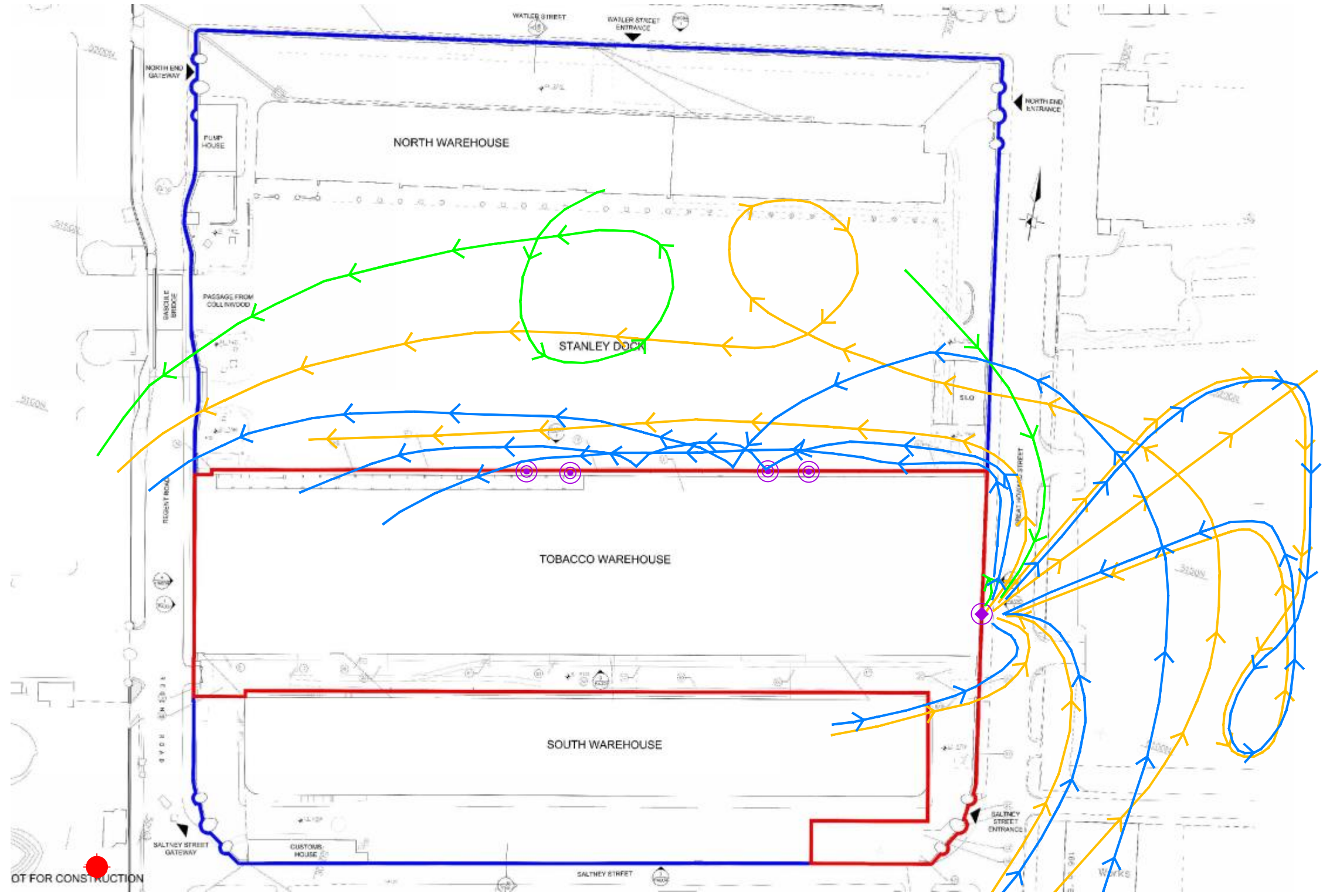
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SCALE 1:1250

Scale @ A3 1:1,250	Drawn CM	Date 30.06.15	Checked	Date	Approved	Date
Project No. A093000	Office MAN	Type EC	Drawing No. 01		Revision	



DO NOT SCALE: CONTRACTOR TO CHECK ALL DIMENSIONS AND REPORT ANY OMISSIONS OR ERRORS

- KEY**
- MALE PEREGRINE FLIGHT LINE
 - FEMALE PEREGRINE FLIGHT LINE
 - JUVENILE PEREGRINE FLIGHT LINE
 - SUSPECTED PEREGRINE NEST
 - POTENTIAL PEREGRINE NEST
 - APPROXIMATE LOCATION OF SINGING BLACK REDSTART ON THE 22nd ON JUNE 2015



REV	DESCRIPTION	BY	CHK	APP	DATE
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Client:
HARCOURT CONSTRUCTION (NI) LTD

ARNDALÉ COURT
HEADINGLEY
LEEDS
LS6 2UJ

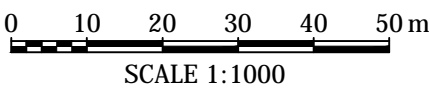


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e-mail: enviro@wyg.com

Project: A093000
STANLEY DOCK TOBACCO WAREHOUSE

Drawing Title:
PEREGRINE SURVEY 23rd JUNE 2015 8:00 - 11:00

Scale @ A3 1:1000	Drawn CM	Date 30.06.15	Checked	Date	Approved	Date
Project No. A093000	Office MAN	Type EC	Drawing No. 02	Revision		





Appendix D – Bat Survey Results



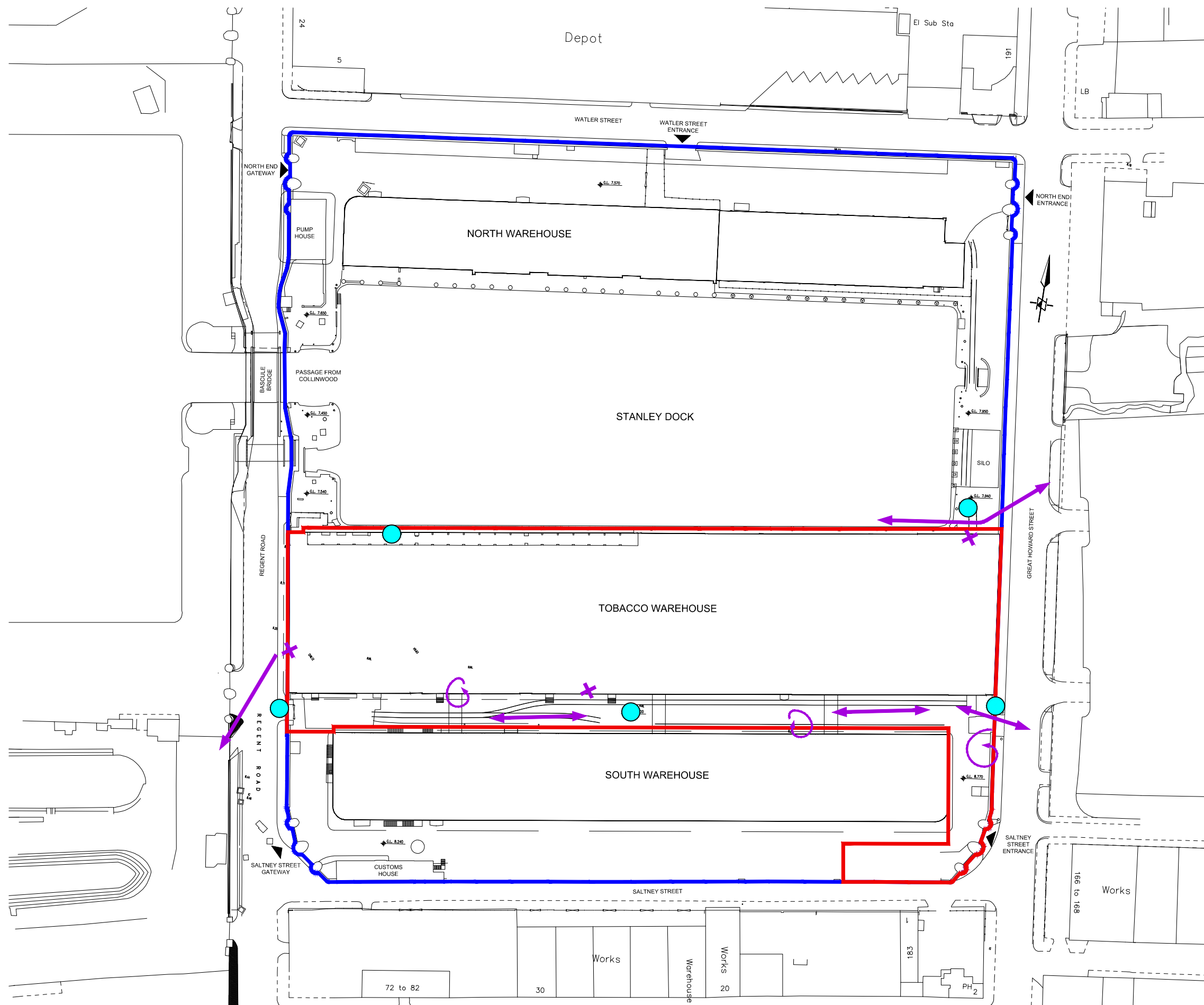
DO NOT SCALE: CONTRACTOR TO CHECK ALL DIMENSIONS AND
REPORT ANY OMISSIONS OR ERRORS

KEY

- SITE BOUNDARY
- ADJACENT LAND WITHIN CLIENT'S OWNERSHIP
- SURVEYOR LOCATION
- DIRECTION OF FLIGHT
- FORAGING ACTIVITY
- POINT OF EMERGENCE

SURVEY SUMMARY

CONFIRMED EMERGENCE OF 4 COMMON
PIPISTRELLE & SUSPECTED EMERGENCE
OF 2 COMMON PIPISTRELLE.



0 12.5 25 37.5 50 62.5 m
SCALE 1:1250

REV	DESCRIPTION	BY	CHK	APP	DATE
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Client:

HARCOURT CONSTRUCTION (NI) LTD

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HEADINGLEY
LEEDS
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Project: A093000

STANLEY DOCK TOBACCO WAREHOUSE

Drawing Title:

BAT EMERGENCE SURVEY 22nd JUNE 2015

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Project No. A093000	Office MAN	Type EC	Drawing No. 01		Revision	

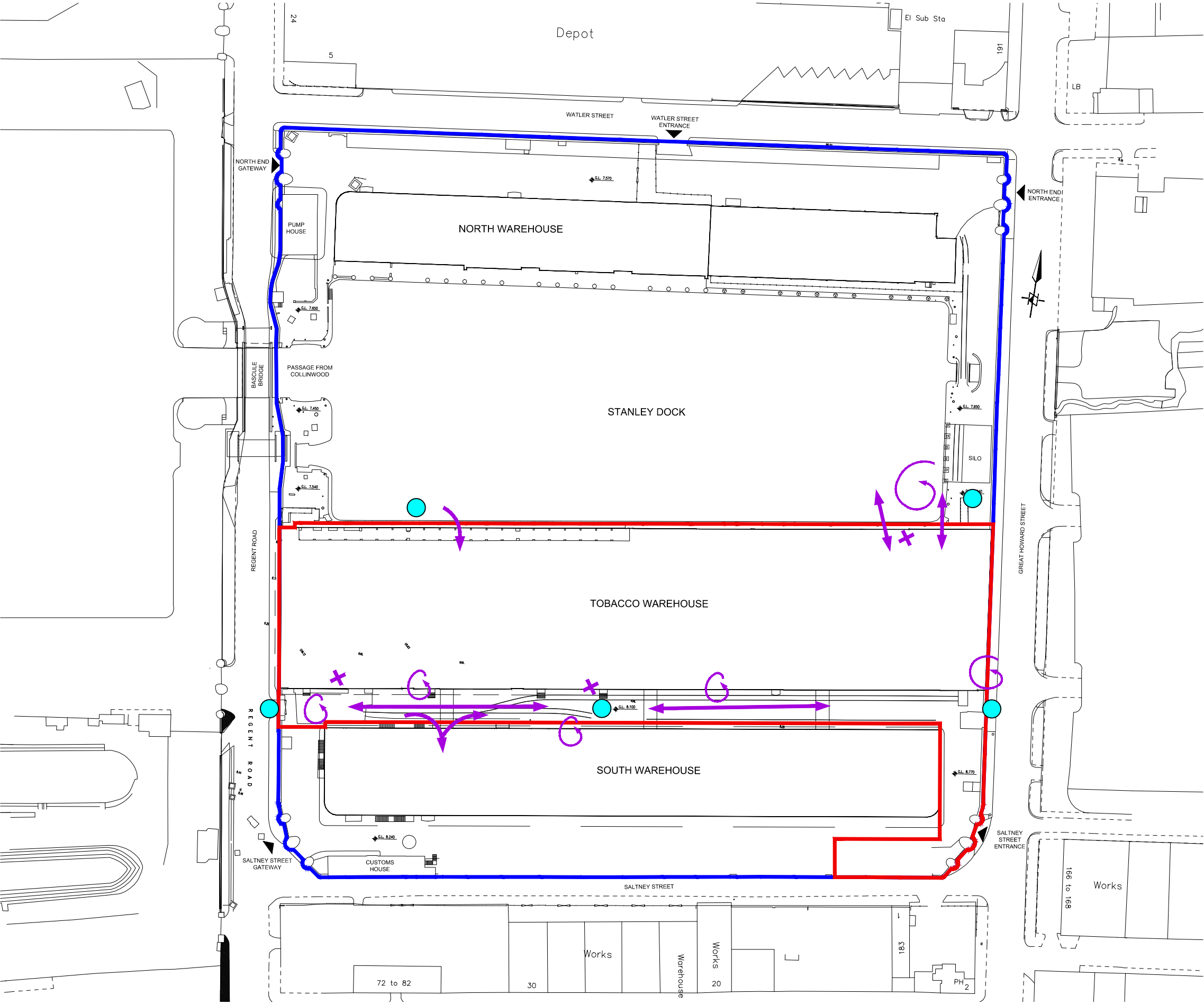
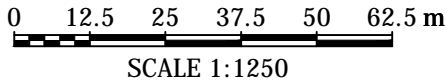


DO NOT SCALE: CONTRACTOR TO CHECK ALL DIMENSIONS AND REPORT ANY OMISSIONS OR ERRORS

KEY

- SITE BOUNDARY
- ADJACENT LAND WITHIN CLIENT'S OWNERSHIP
- SURVEYOR LOCATION
- DIRECTION OF FLIGHT
- FORAGING ACTIVITY
- POINT OF EMERGENCE

SURVEY SUMMARY
CONFIRMED RE-ENTRY OF 4 COMMON PIPISTRELLE & SUSPECTED EMERGENCE OF 2 COMMON PIPISTRELLE.



REV	DESCRIPTION	BY	CHK	APP	DATE
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Client:
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Project: A093000
STANLEY DOCK TOBACCO WAREHOUSE

Drawing Title:
BAT RE-ENTRY SURVEY 26th JUNE 2015

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Project No. A093000	Office MAN	Type EC	Drawing No. 02		Revision	

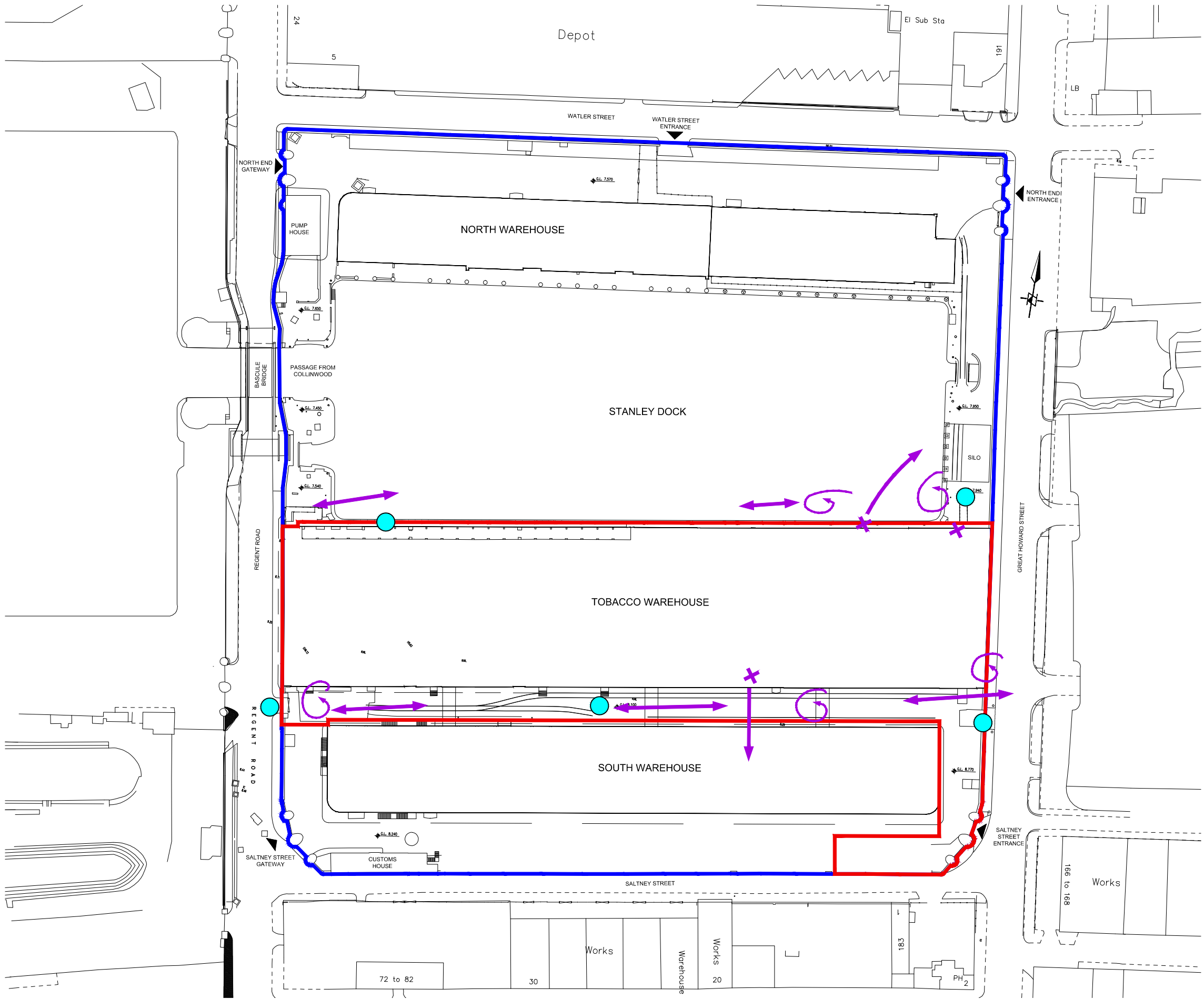


DO NOT SCALE: CONTRACTOR TO CHECK ALL DIMENSIONS AND REPORT ANY OMISSIONS OR ERRORS

KEY

- SITE BOUNDARY
- ADJACENT LAND WITHIN CLIENT'S OWNERSHIP
- SURVEYOR LOCATION
- DIRECTION OF FLIGHT
- FORAGING ACTIVITY
- POINT OF EMERGENCE

SURVEY SUMMARY
CONFIRMED EMERGENCE OF 6 COMMON PIPISTRELLE & SUSPECTED EMERGENCE OF 1 COMMON PIPISTRELLE.



REV	DESCRIPTION	BY	CHK	APP	DATE
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Client:
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Project: A093000
STANLEY DOCK TOBACCO WAREHOUSE

Drawing Title:
BAT EMERGENCE SURVEY 30th JUNE 2015

Scale @ A3 1:1,250	Drawn CM	Date 01.07.15	Checked	Date	Approved	Date
Project No. A093000	Office MAN	Type EC	Drawing No. 03		Revision	



DO NOT SCALE: CONTRACTOR TO CHECK ALL DIMENSIONS AND REPORT ANY OMISSIONS OR ERRORS

KEY



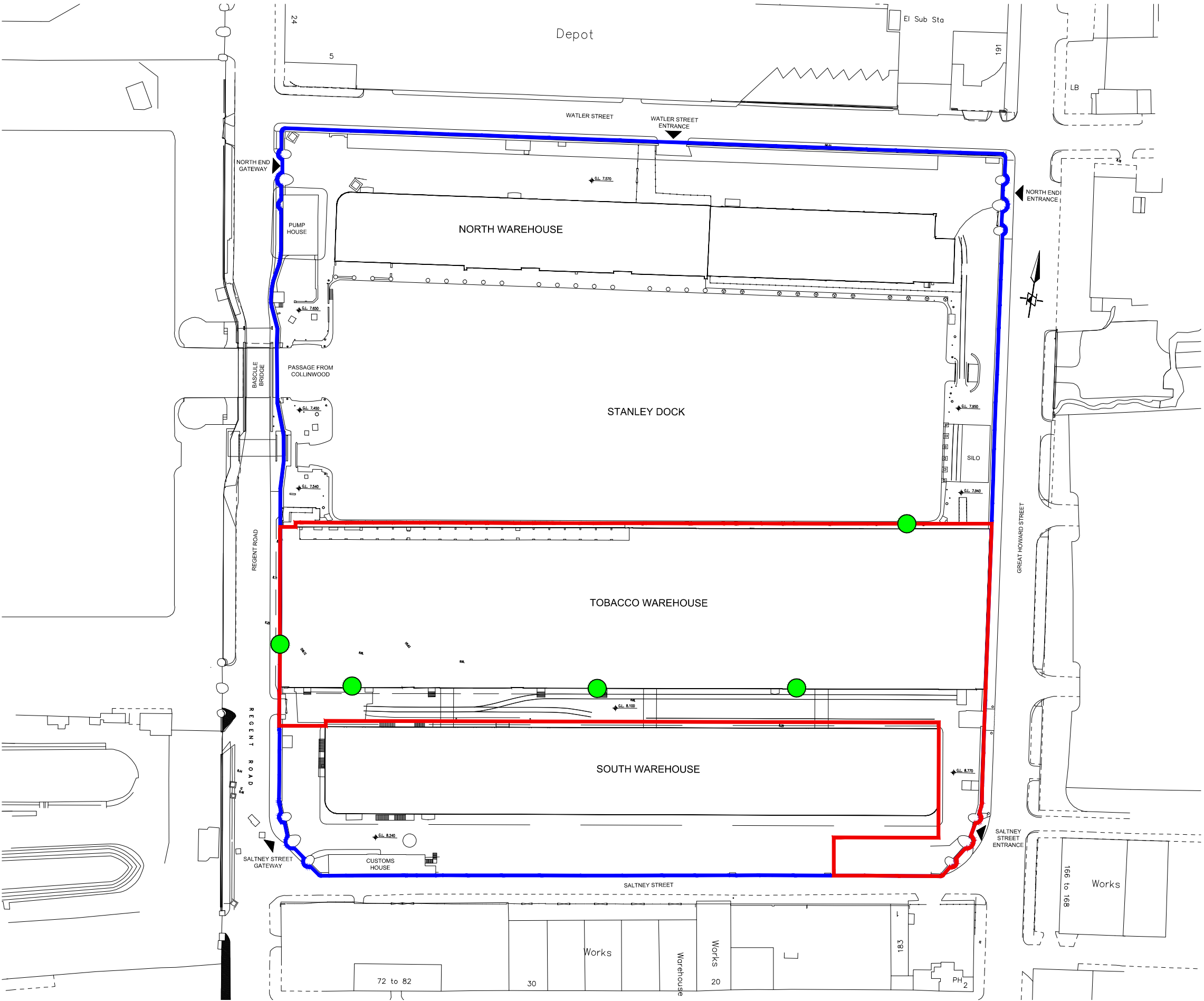
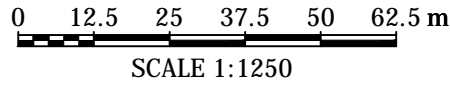
SITE BOUNDARY



ADJACENT LAND WITHIN CLIENT'S OWNERSHIP



BAT ROOST LOCATION



REV	DESCRIPTION	BY	CHK	APP	DATE
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HARCOURT CONSTRUCTION (NI) LTD

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Project: A093000
STANLEY DOCK TOBACCO WAREHOUSE

Drawing Title:
BAT ROOST LOCATIONS

Scale @ A3 1:1,250	Drawn CM	Date 01.07.15	Checked	Date	Approved	Date
Project No. A093000	Office MAN	Type EC	Drawing No. 04	Revision		



Appendix E – Terms and conditions



WYG

Report Conditions

Harcourt Construction (NI) Limited – Tobacco Warehouse, Liverpool

Bat and Peregrine Surveys 2015

This report is produced solely for the benefit of Harcourt Construction (NI) Limited and no liability is accepted for any reliance placed on it by any other party unless specifically agreed in writing otherwise.

This report is prepared for the proposed uses stated in the report and should not be used in a different context without reference to WYG. In time improved practices, fresh information or amended legislation may necessitate a re-assessment. Opinions and information provided in this report are on the basis of WYG using due skill and care in the preparation of the report.

This report refers, within the limitations stated, to the environment of the site in the context of the surrounding area at the time of the inspections. Environmental conditions can vary and no warranty is given as to the possibility of changes in the environment of the site and surrounding area at differing times.

This report is limited to those aspects reported on, within the scope and limits agreed with the client under our appointment. It is necessarily restricted and no liability is accepted for any other aspect. It is based on the information sources indicated in the report. Some of the opinions are based on unconfirmed data and information and are presented as the best obtained within the scope for this report.

Reliance has been placed on the documents and information supplied to WYG by others but no independent verification of these has been made and no warranty is given on them. No liability is accepted or warranty given in relation to the performance, reliability, standing etc of any products, services, organisations or companies referred to in this report.

Whilst skill and care have been used, no investigative method can eliminate the possibility of obtaining partially imprecise, incomplete or not fully representative information. Any monitoring or survey work undertaken as part of the commission will have been subject to limitations, including for example timescale, seasonal and weather related conditions.

Although care is taken to select monitoring and survey periods that are typical of the environmental conditions being measured, within the overall reporting programme constraints, measured conditions may not be fully representative of the actual conditions. Any predictive or modelling work, undertaken as part of the commission will be subject to limitations including the representativeness of data used by the model and the assumptions inherent within the approach used. Actual environmental conditions are typically more complex and variable than the investigative, predictive and modelling approaches indicate in practice, and the output of such approaches cannot be relied upon as a comprehensive or accurate indicator of future conditions.

The potential influence of our assessment and report on other aspects of any development or future planning requires evaluation by other involved parties.

The performance of environmental protection measures and of buildings and other structures in relation to acoustics, vibration, noise mitigation and other environmental issues is influenced to a large extent by the degree to which the relevant environmental considerations are incorporated into the final design and specifications and the quality of workmanship and compliance with the specifications on site during construction. WYG accept no liability for issues with performance arising from such factors.

November 2008

WYG Environment Planning Transport Ltd.