

Environmental Impact Assessment Report - Figures

Mixed Use Development - Opera Site, Limerick

Limerick City and County Council

March 2019

DOCUMENT CONTAINS FIGURES NOT INTEGRATED INTO THE EIAR DOCUMENT

Figure 9.1 Air Quality Receptors and Local Measurement Data

Figure 10.1 Existing Receptor and Noise Monitoring Locations

Figure 10.2 Proposed Receptor Locations

Figure 16.1 Designated Sites for Nature Conservation

Figure 16.2 Significant Ecological Features

Figure 16.3 Mitigation for Significant Ecological Features



LEGEND

- Site Boundary
- Ecological Receptors
- Human Receptors
- O'Connell St Monitoring

Description of Diagram:

This diagram shows isopleth air quality receptor locations in the vicinity of the site. A blue marker also indicates location of local air quality monitoring (O'Connell St) as discussed in the Air Quality Chapter

Sources: Esri, HERE, Garmin, USGS, Intermap, Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community

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Client:	Limerick City and County Council
Project:	Project Opera

Title:	Air Quality Receptors and Local Measurement Data
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Date:	29/01/2019	Scale at A3:	1:3,000
Figure 9-1			A3



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Project Title:

OPERA SITE

Client:

LIMERICK CITY AND
COUNTY COUNCIL

LEGEND

-  Existing Receptor Locations
-  Noise Monitoring Locations

Notes:

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60568520

Drawing Title:

Figure 10.1:
Existing Receptor & Noise
Monitoring Locations

Scale at A3:

Date: 11/01/19

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LEGEND

- Offices
- Aparthotel
- Residential
- Commercial/
Cultural

Notes:

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Drawing Title:

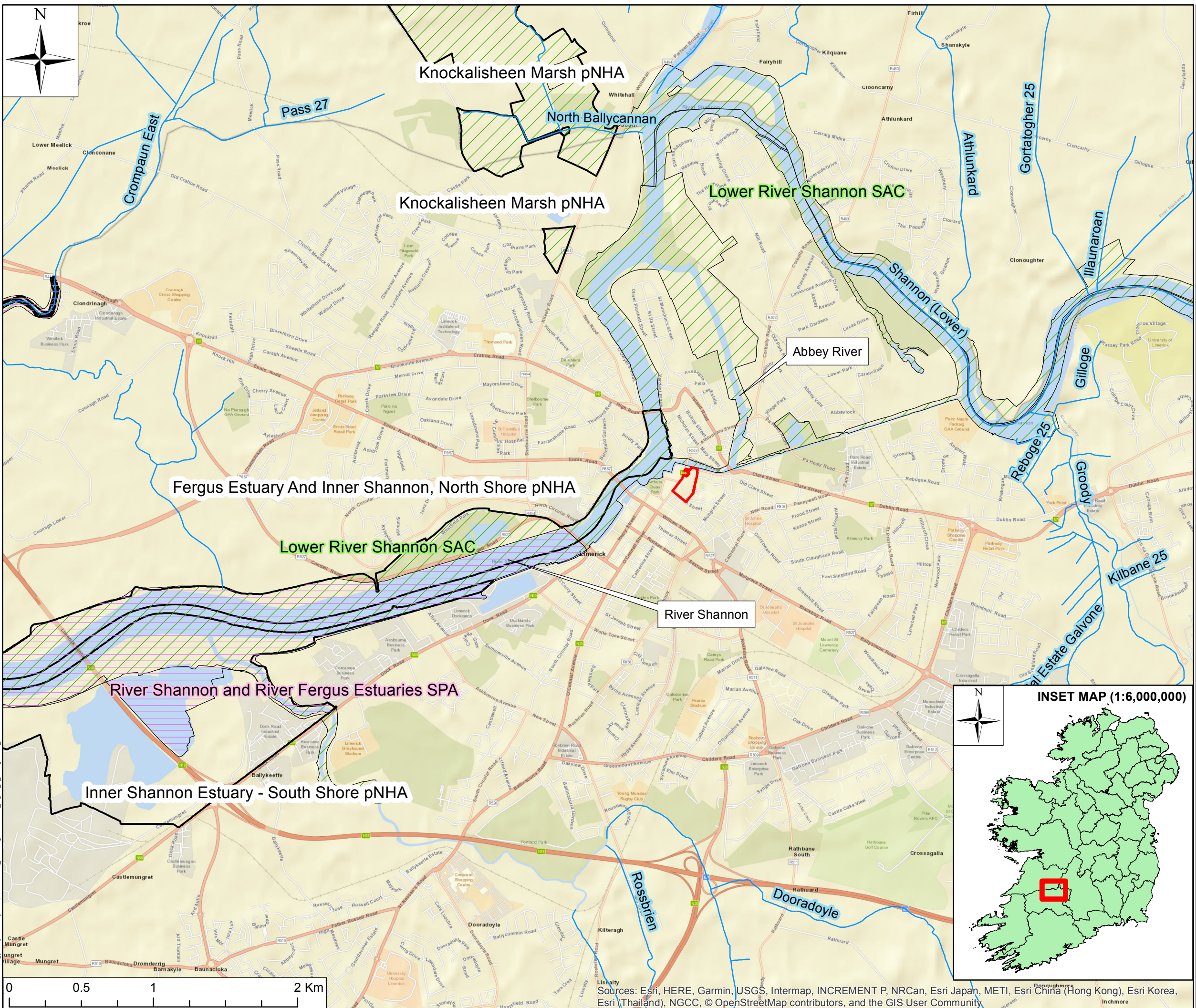
**Figure 10.2: Pro-
 posed Receptor
 Locations**

Scale at A3: Not to Scale

Date: 11/01/19

Drawn: Chk'd: Ver'd App'd:

RS AM MM MM



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Project Title:
 OPERA SITE

Client:
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- LEGEND**
- Proposed Development Site
 - Watercourses
 - Special Protection Area (SPA)
 - Special Area of Conservation (SAC)
 - Proposed Natural Heritage Area (pNHA)

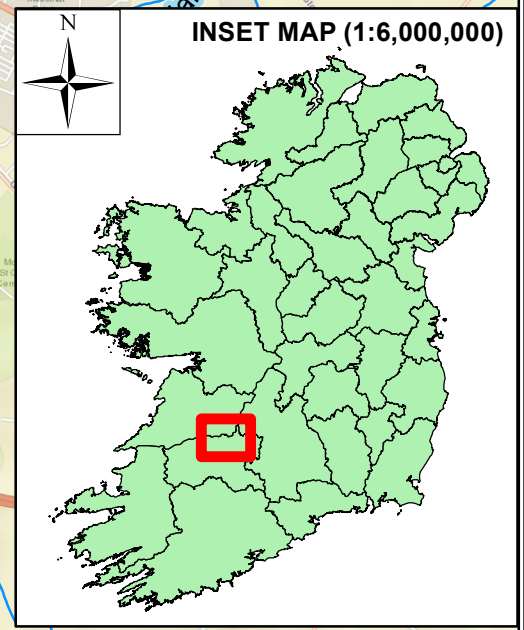
Notes:
 There are no existing Natural Heritage Areas (NHAs) in the map extent

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Drawing Title:
 FIGURE. 16.1. DESIGNATED SITES FOR NATURE CONSERVATION

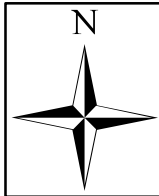
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 30/01/19

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Filename: X:\Ecology Projects\Opera\GIS\07_Working\20190119_Fig17.1_Designated_Sites.v9.mxd

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community



Bryophytes on limestone wall assumed to correspond to Qualifying Interest (QI) Watercourses of Plain to Montane levels.

Abbey River

Outfall to Abbey River, fitted with flap valve.

Lower River Shannon SAC

Charlotte's Quay

Lesser Black-backed gull

Herring Gull

Starling

Bat Roost (9 Rutland Street)

House Sparrow

Michael Street

Rutland Street

Starling

Jackdaw

Starling

Ellen Street

Starling

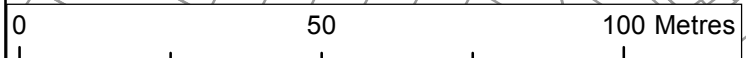
Jackdaw

Feral pigeon

Feral pigeon

House Sparrow

House Sparrow



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Project Title:

OPERA SITE

Client:

LIMERICK CITY AND COUNTY COUNCIL

LEGEND

- Proposed Development Site
- Proposed Surface Water Drainage
- QI watercourses of plain to montane levels habitat (bryophytes) of Lower River Shannon SAC
- Special Area of Conservation (SAC) and extent of QI estuary habitat
- Features Relating to Bats**
- Static bat detector locations
- Features Relating to Birds**
- Nesting Bird Locations
- Roost site (Common Pipistrelle)
- 'Hotspot' for Bat Activity
- Habitats (and Fossitt Code as relevant)**
- Recolonising bare ground (ED3)
- Spoil and bare ground (ED2)
- Street Trees (Negligible Bat Roost Suitability)

Notes:

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Drawing Title:

FIGURE. 16.2. SIGNIFICANT ECOLOGICAL FEATURES

Scale at A3: 1:1,250

Date:

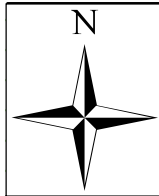
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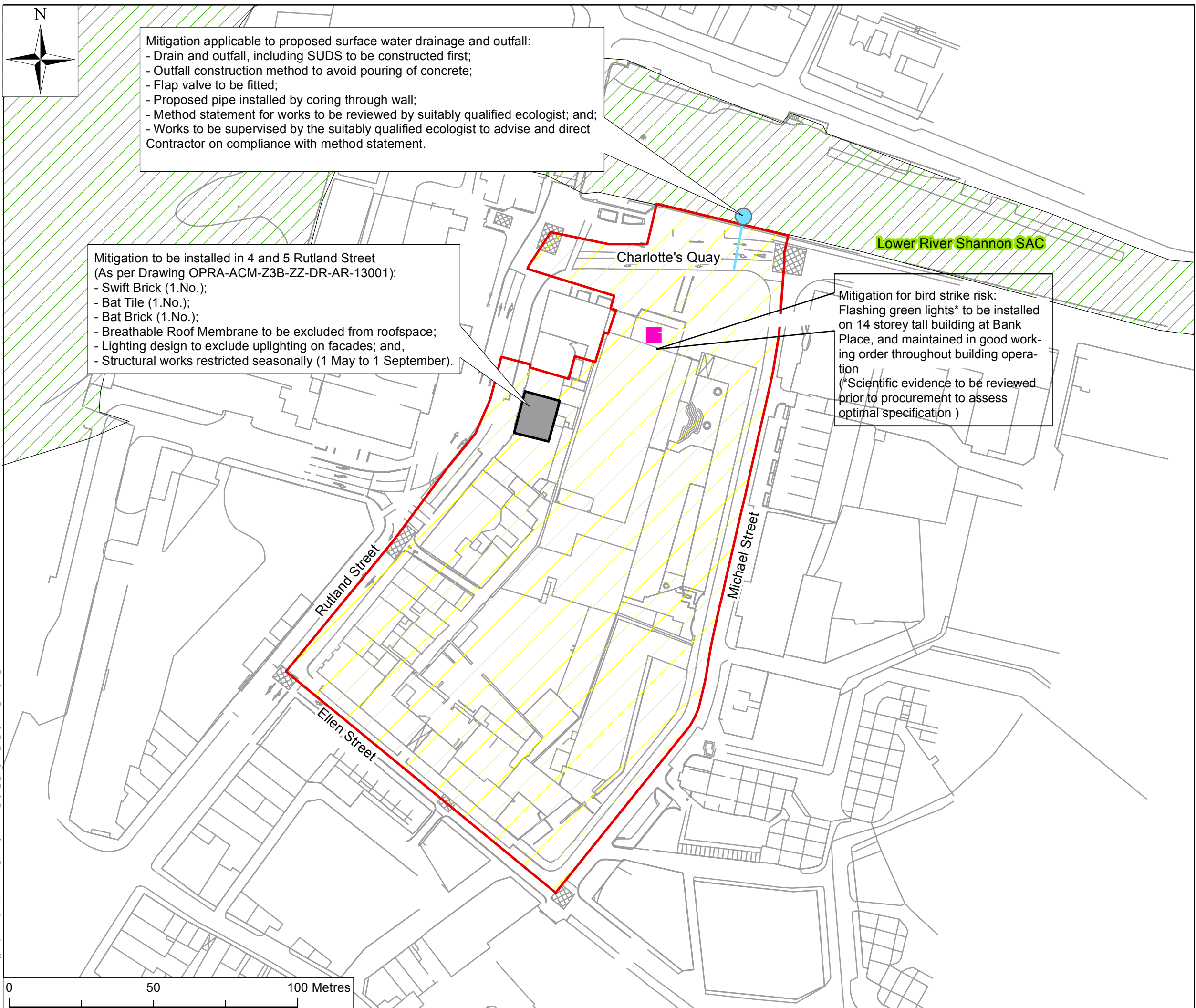
Mitigation applicable to proposed surface water drainage and outfall:

- Drain and outfall, including SUDS to be constructed first;
- Outfall construction method to avoid pouring of concrete;
- Flap valve to be fitted;
- Proposed pipe installed by coring through wall;
- Method statement for works to be reviewed by suitably qualified ecologist; and;
- Works to be supervised by the suitably qualified ecologist to advise and direct Contractor on compliance with method statement.

Mitigation to be installed in 4 and 5 Rutland Street (As per Drawing OPRA-ACM-Z3B-ZZ-DR-AR-13001):

- Swift Brick (1.No.);
- Bat Tile (1.No.);
- Bat Brick (1.No.);
- Breathable Roof Membrane to be excluded from roofspace;
- Lighting design to exclude uplighting on facades; and,
- Structural works restricted seasonally (1 May to 1 September).

Mitigation for bird strike risk: Flashing green lights* to be installed on 14 storey tall building at Bank Place, and maintained in good working order throughout building operation (*Scientific evidence to be reviewed prior to procurement to assess optimal specification)



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Project Title:
 OPERA SITE

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LEGEND

- Proposed Development Site
- Proposed Surface Water Drainage
- Special Area of Conservation (SAC)
- 4 and 5 Rutland Street
- Buildings potentially containing nesting birds; seasonal works triggered
- Strobe light location (Proposed Tower: Bank Place)

Notes:

- Refer to Chapter 16 for full suite of biodiversity mitigation.
- Other pollution mitigation during construction related to flood risk, phasing and drainage works is detailed in Chapter 8 of EIAR.

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 FIGURE. 16.3. MITIGATION FOR SIGNIFICANT ECOLOGICAL FEATURES

Scale at A3: 1:1,250

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