

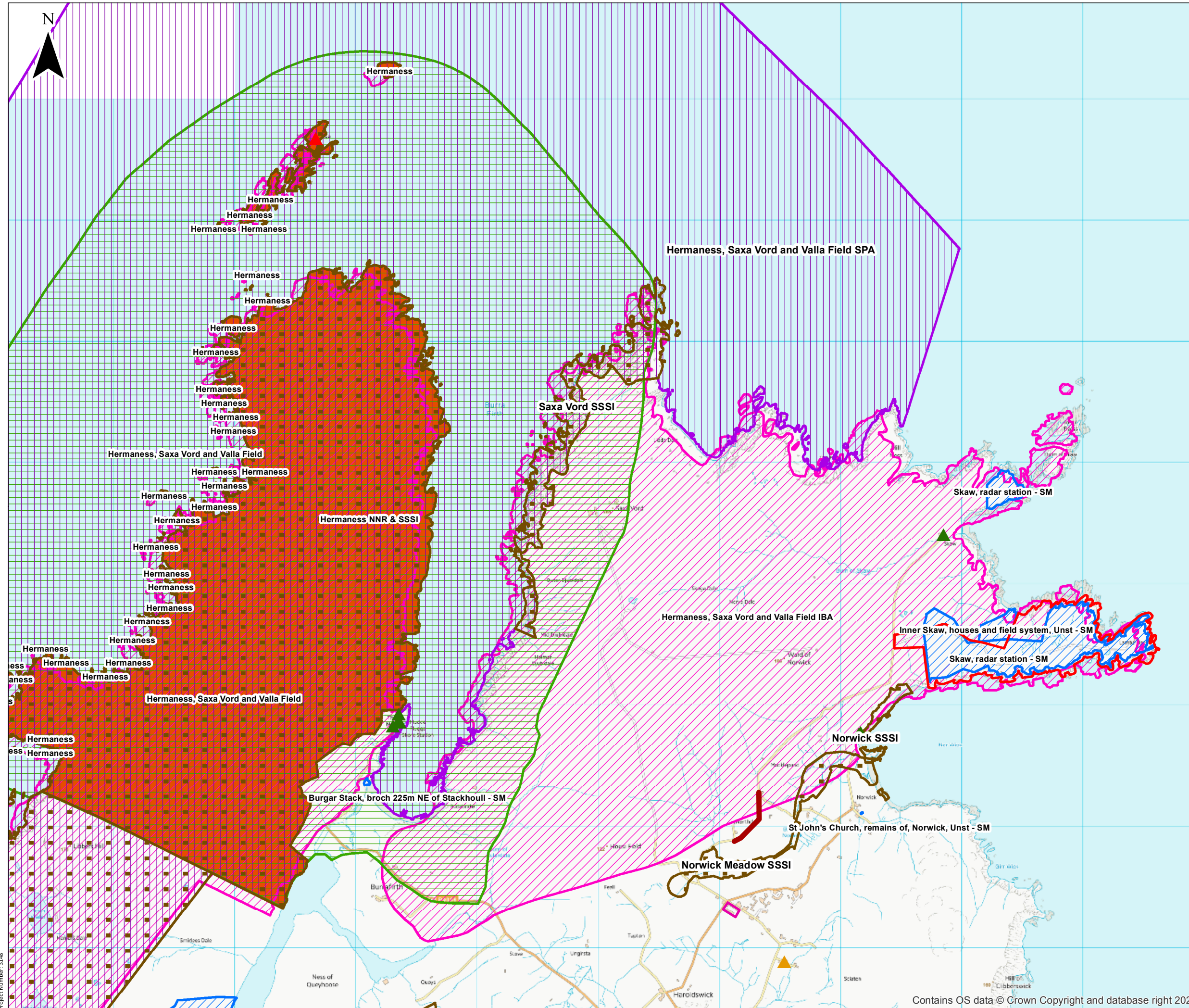


Volume III AEE Drawings

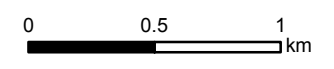




Chapter 1 Drawing 1.1 Statutory Environmental Designations



- KEY**
- Proposed Launch Site Boundary
 - New Section of Access
 - Launch and Range Control Centre Boundary
 - Site of Special Scientific Interest (SSSI)
 - Special Protection Area
 - Important Bird Area
 - National Nature Reserve
 - National Scenic Area
 - Scheduled Monument
 - ▲ A-Listed Building
 - ▲ B-Listed Building
 - ▲ C-Listed Building



Scale 1:30,000 @ A3



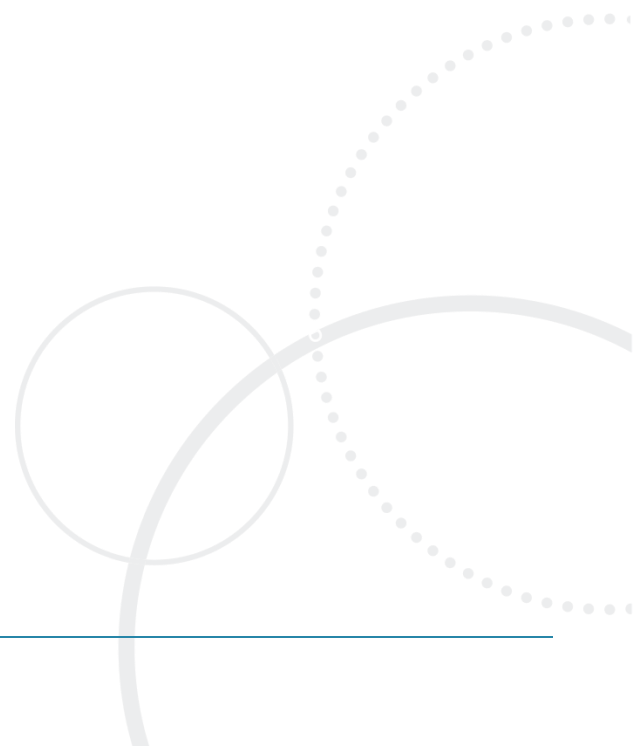
Shetland Space Centre
Saxa Vord Spaceport
Assessment of Environmental Effects

Drawing 1.1
Statutory Environmental Designations

Project Number: 3108



Chapter 2 Drawing 2.1 Study Areas within Environmental Zone of Influence



-110000 -100000 -90000 -80000 -70000 -60000



8560000
















8550000

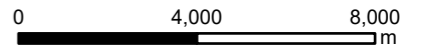
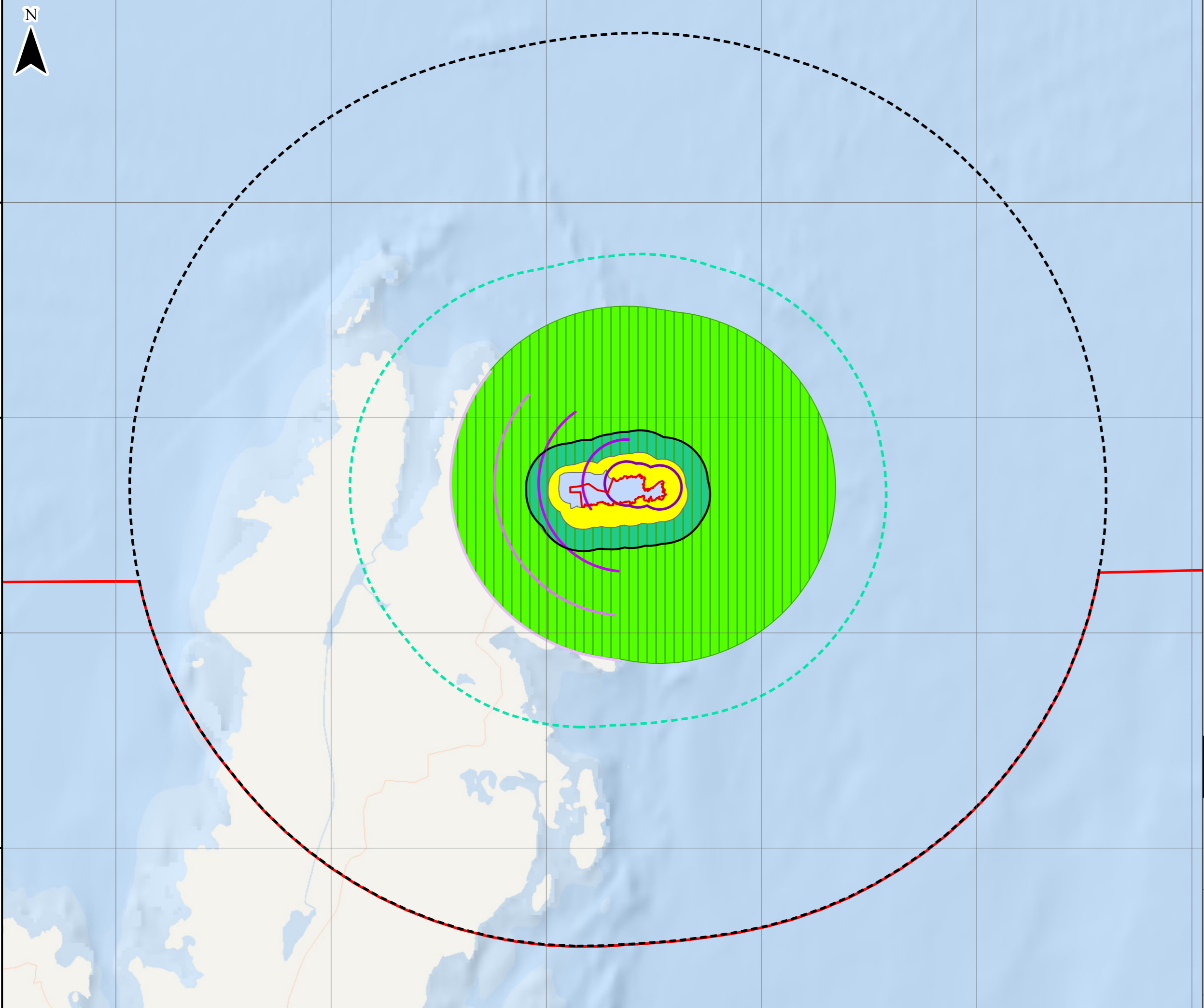
8540000

8530000

-110000 -100000 -90000 -80000 -70000 -60000

KEY

-  Ornithology - 4km buffer
-  Ornithology - 3km buffer
-  Ornithology - 2km buffer
-  Ornithology - 1km buffer
-  Ornithology - 0.5km buffer
-  Ecology – Habitat Study Area
-  Noise – Study Area
-  Ornithology – Study Area
-  Water – Study Area
-  Environmental Zone of Influence
-  LVIA – Study Area
-  Project Site Boundary
-  Ecology – Otter Study Area
-  Archaeology and Cultural Heritage – Study Area
-  Air Quality - Study Area



Scale 1:169,661 @ A3



Shetland Space Centre
Assessment of Environmental Effects

Drawing 2.1

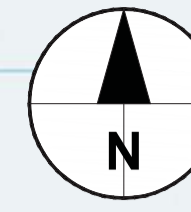
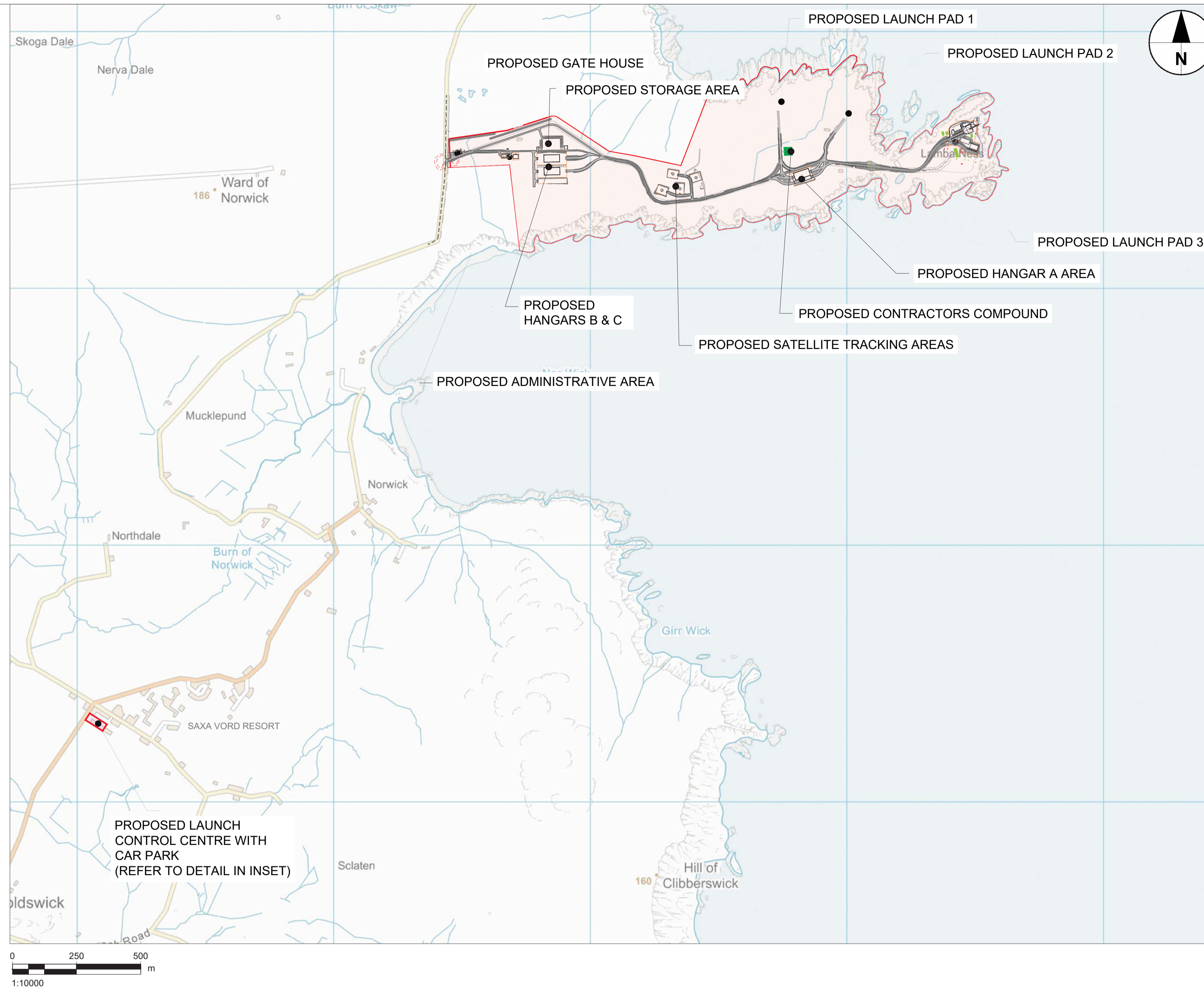
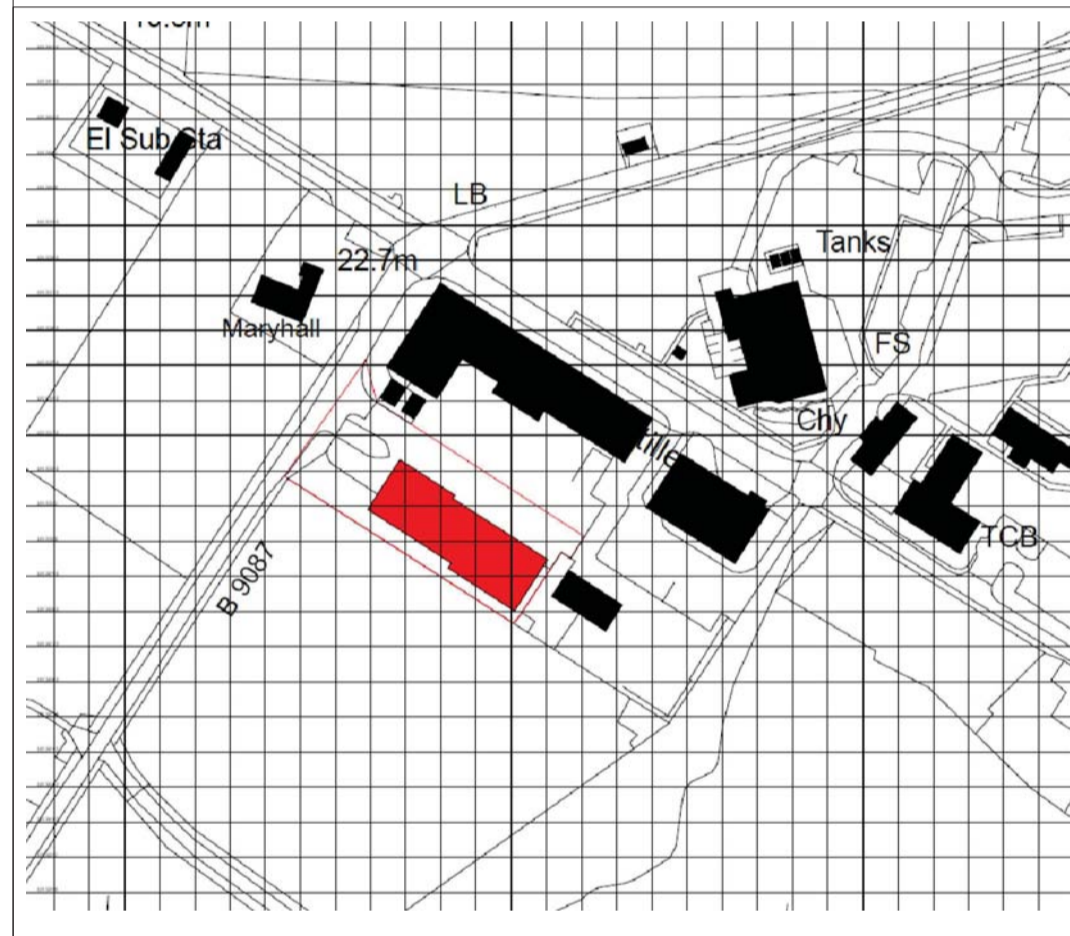
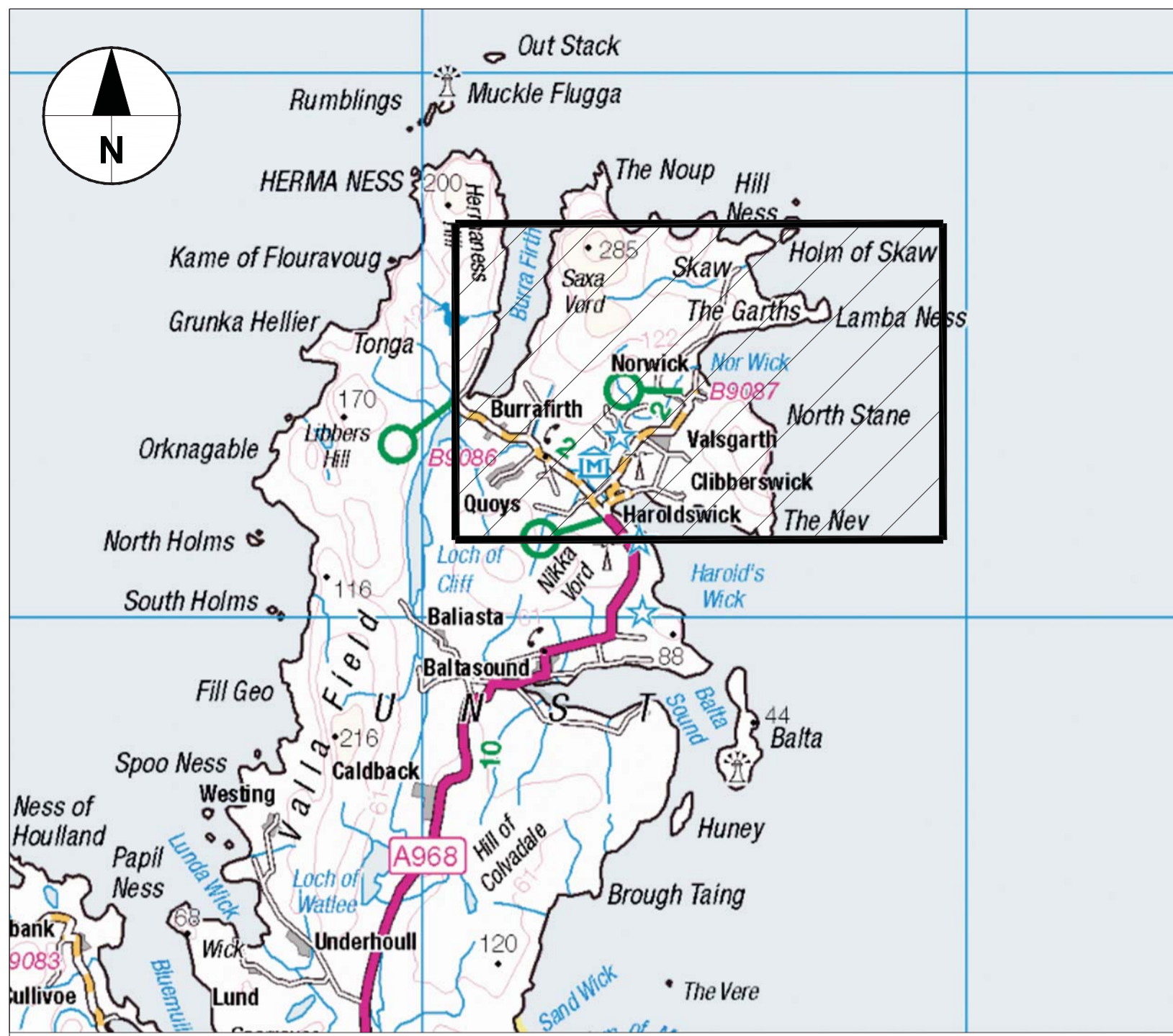
Environmental Zone of Influence

Date: 6/23/2023	Drawn by: NB	Checked by: IW	Version: Draft/V1
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Project Number: 3148

Service Layer Credits: World Ocean Base: OceanWise, Esri, DeLorme, NaturalVue
World Ocean Base: OceanWise, Esri, GEBCO, DeLorme, NaturalVue

Chapter 3 Drawing 3.1 Proposed Project Location



- Notes
- SITE OF PROPOSED PROJECT
 - PROPOSED LAUNCH CONTROL CENTRE

Key Plan

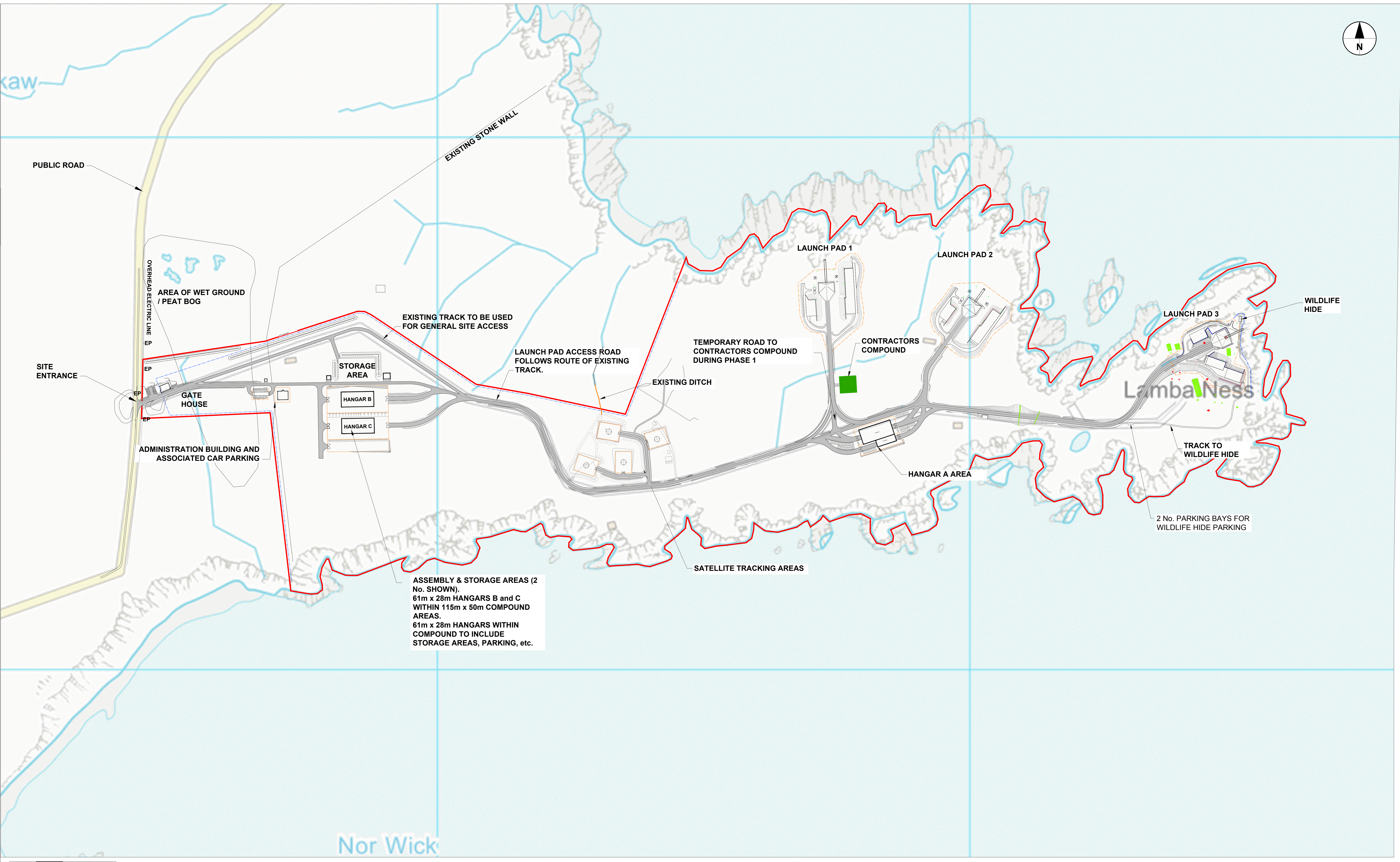
Purpose Of Issue
 SPACEPORT LICENCE APPLICATION
 Project Number
 60617516
 Sheet Title
 OVERALL PROPOSAL MAP

Sheet Number
 DRAWING 3.1
 Scale: 1:10,000

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Chapter 3 Drawing 3.2 Proposed Project Layout

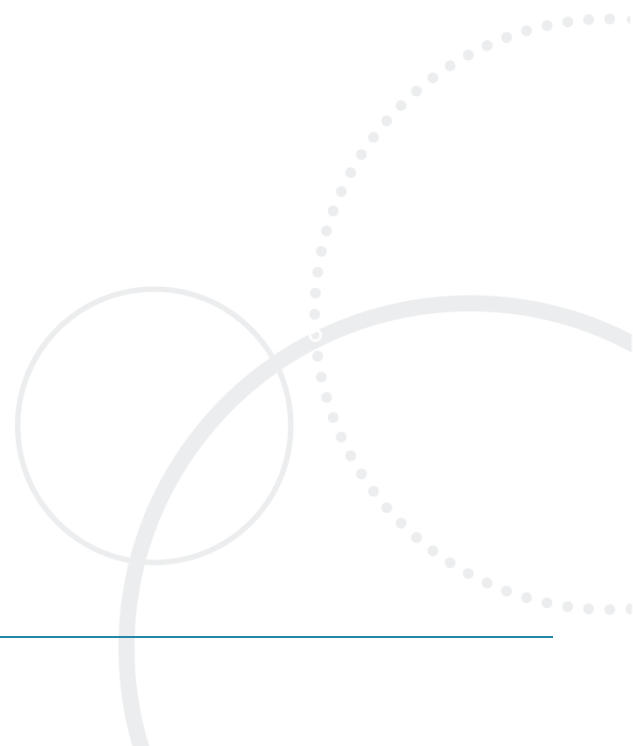


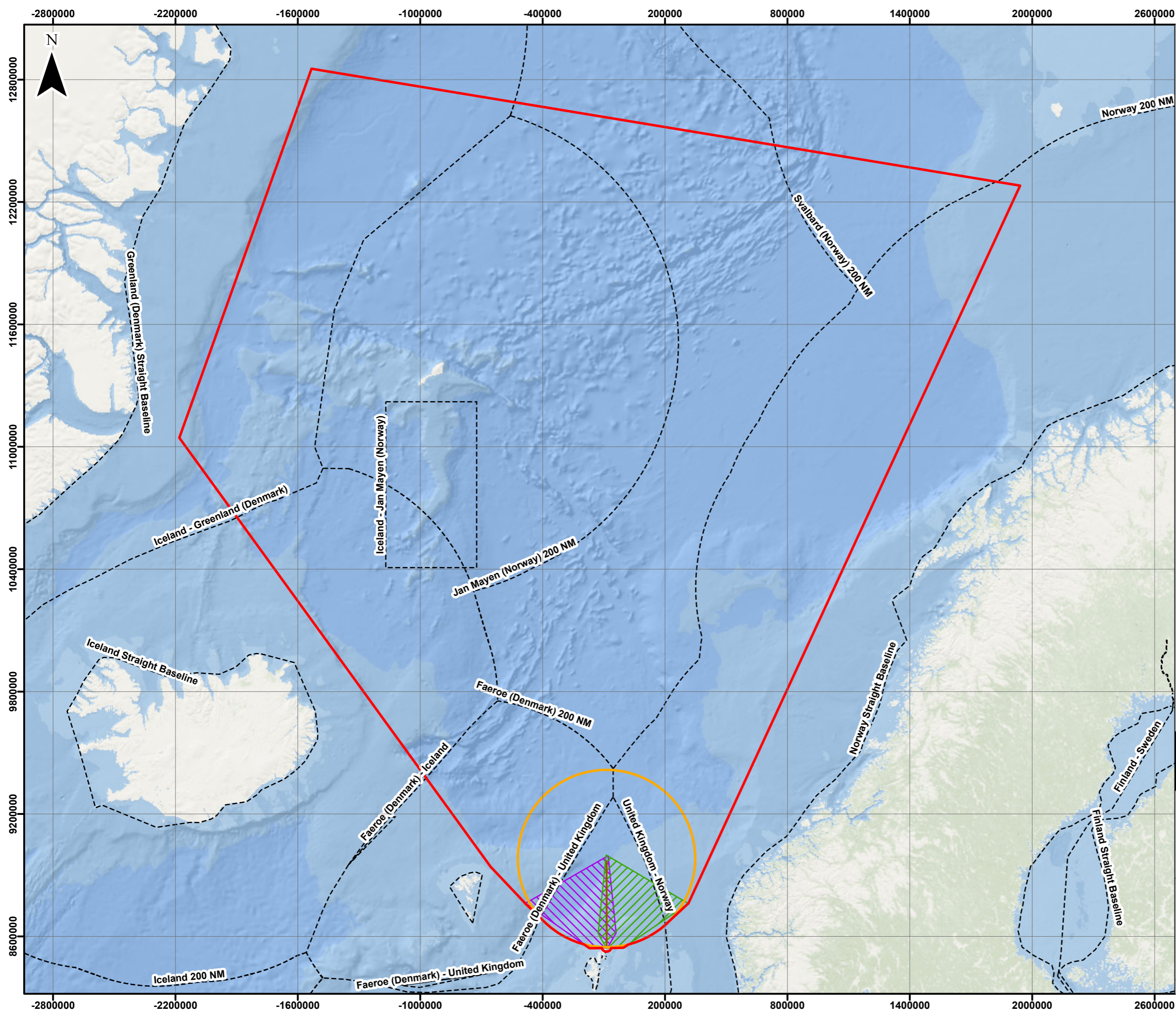
ASSEMBLY & STORAGE AREAS (2 No. SHOWN).
61m x 28m HANGARS B and C WITHIN 115m x 50m COMPOUND AREAS.
61m x 28m HANGARS WITHIN COMPOUND TO INCLUDE STORAGE AREAS, PARKING, etc.

Rev	Date	Description	Drw/Chk/Appr

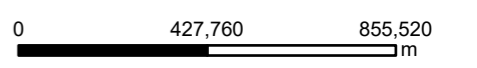


Chapter 3 Drawing 3.3 Environmental Zone of Influence





- KEY**
- Environmental Zone of Influence
 - Suborbital Launch Impact Dispersion Area
 - 000 Azimuth from Proposed Project
 - Orbital Launch Flight Corridor: 030 azimuth
 - Orbital Launch Flight Corridor: 330 azimuth
 - EEZ boundaries



Scale 1:17,151,969 @ A3



Shetland Space Centre
Assessment of Environmental Effects

Drawing 3.3

Environmental Zone of Influence

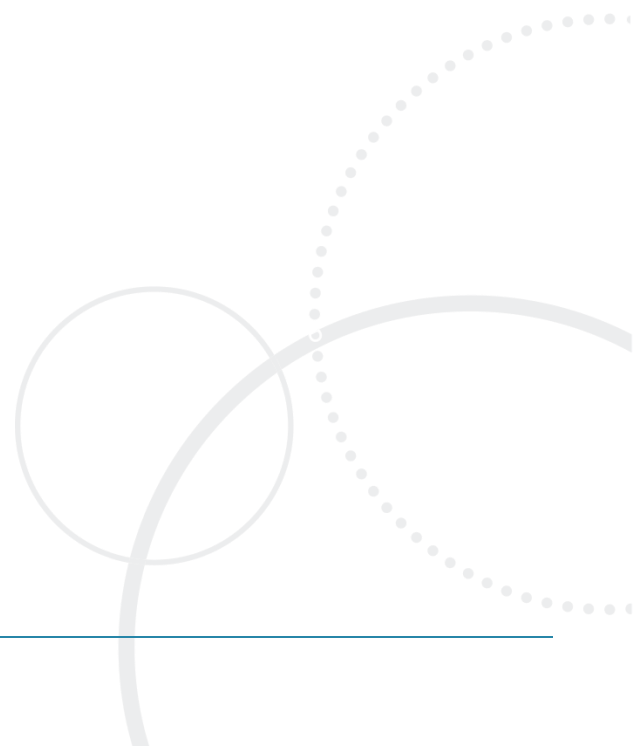
Date: 6/23/2023	Drawn by: NB	Checked by: IW	Version: Draft/V1
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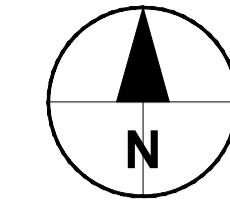
Project Number: 3148

Service Layer Credits: World Ocean Base: OceanWise, Esri, GEBCO, DeLorme, NaturalVue
World Ocean Base: Esri, GEBCO, DeLorme, NaturalVue

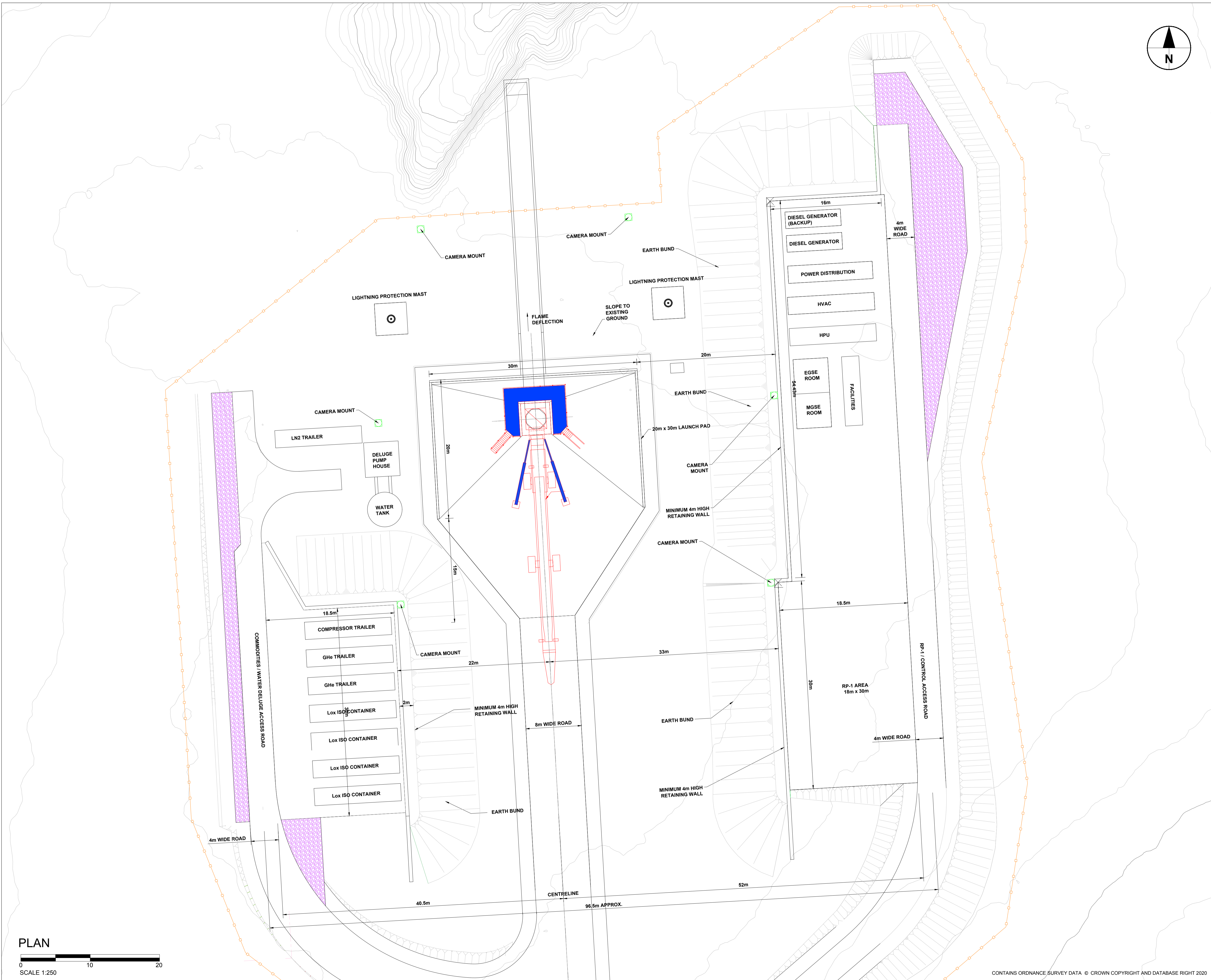


Chapter 3 Drawing 3.4 Launch Pad 1 Layout

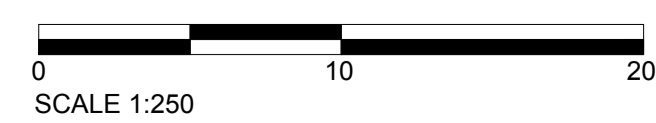




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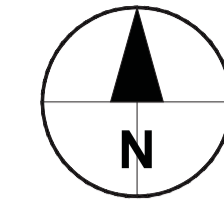
PLAN



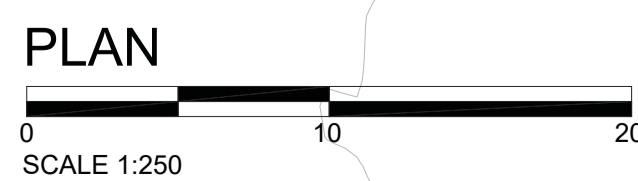


Chapter 3 Drawing 3.5 Launch Pad 2 Layout

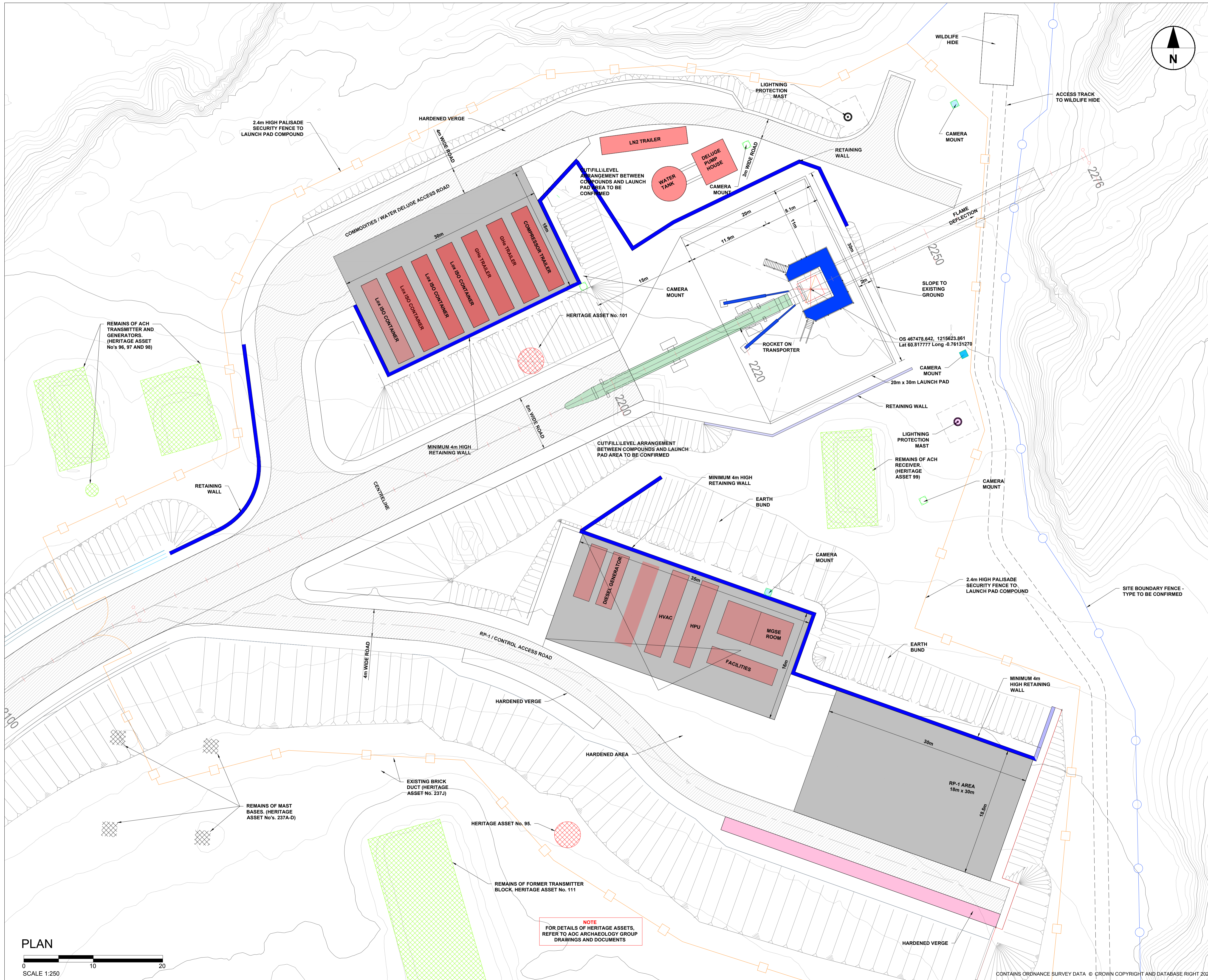




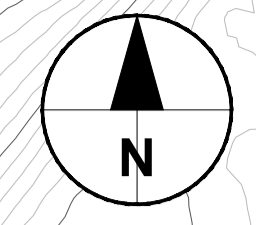
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Chapter 3 Drawing 3.6 Launch Pad 3 Layout



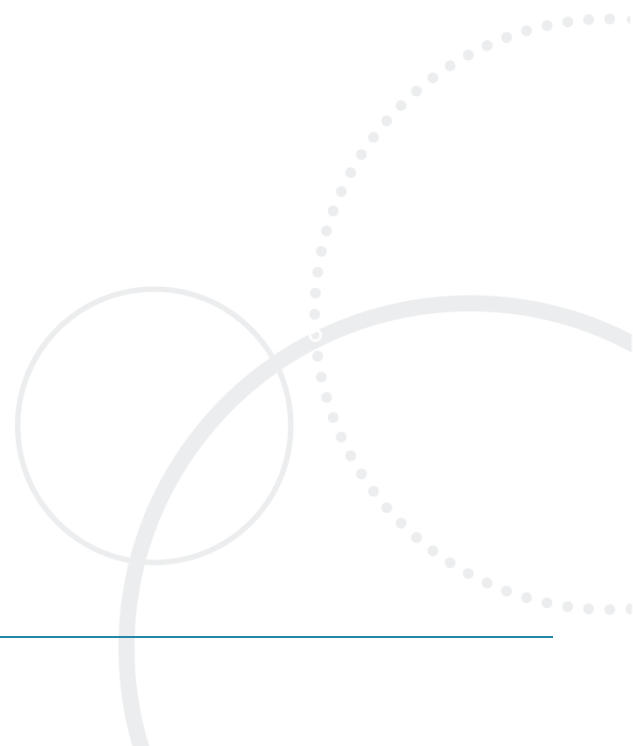
NOTE
FOR DETAILS OF HERITAGE ASSETS,
REFER TO AOC ARCHAEOLOGY GROUP
DRAWINGS AND DOCUMENTS



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Chapter 4 -

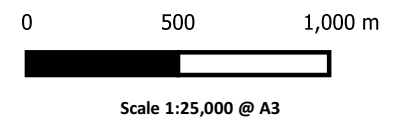




Chapter 5 Drawing 5.1 Breeding Birds Study Area



- KEY**
- Proposed Project Site Boundary
 - Launch pad
 - 0.5km buffer launch pads
 - 1km buffer launch pads
 - 2km buffer launch pads
 - 3km buffer launch pads
 - 4km buffer launch pads



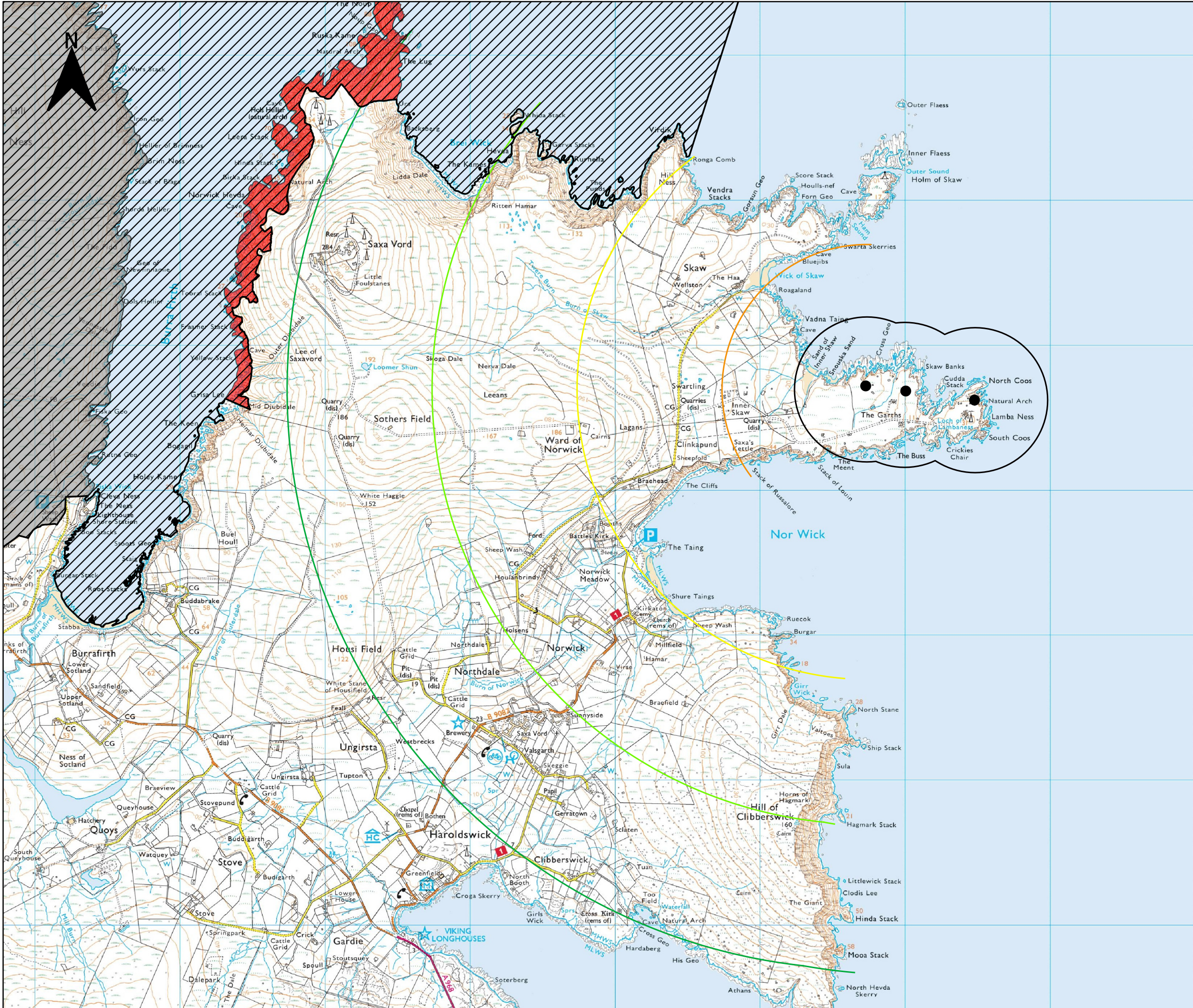
Saxavord Spaceport
Assessment of Environmental Effects











Drawing 5.1
Breeding birds Study Area

Date: 16/11/2021	Drawn by: K.M.	Checked by: P.C.	Version: Rev. 6
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Project Number: 3148

Chapter 5 Drawing 5.2 Designated Sites



- KEY**
-  Hermaness, Saxa Vord and Valla Field SPA
 -  Hermaness SSSI
 -  Saxa Vord SSSI
 -  Proposed Project Site Boundary
 -  Launch pad
 -  0.5km buffer launch pads
 -  1km buffer launch pads
 -  2km buffer launch pads
 -  3km buffer launch pads
 -  4km buffer launch pads

0 500 1,000 m



Scale 1:25,000 @ A3



Saxa Vord Spaceport
Assessment of Environmental Effects

Drawing 5.2
Designated sites within
ornithological Study Area

Date: 16/11/2021	Drawn by: K.M.	Checked by: P.C.	Version: Rev. 6
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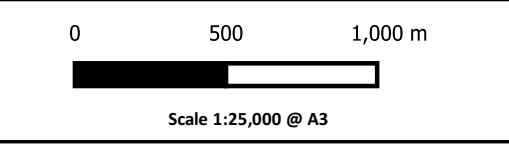


Chapter 5 Drawing 5.3 Breeding Black Guillemot





- KEY**
- Black guillemot individuals
 - Proposed Project Site Boundary
 - Launch pad
 - 0.5km buffer launch pads
 - 1km buffer launch pads
 - 2km buffer launch pads
 - 3km buffer launch pads
 - 4km buffer launch pads



Saxa Vord Spaceport
Assessment of Environmental Effects

Drawing 5.3
Breeding black guillemot within the Study Area

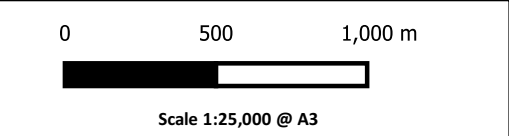
Date: 16/11/2021	Drawn by: K.M.	Checked by: P.C.	Version: Rev. 6
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Project Number: 3148

Chapter 5 Drawing 5.4 Breeding Shag



- KEY**
- ▲ Shag Apparently Occupied Nests
 - Proposed Project Site Boundary
 - Launch pad
 - 0.5km buffer launch pads
 - 1km buffer launch pads
 - 2km buffer launch pads
 - 3km buffer launch pads
 - 4km buffer launch pads



Saxavord Spaceport
 Assessment of Environmental Effects

Drawing 5.4
Breeding shag within the Study Area

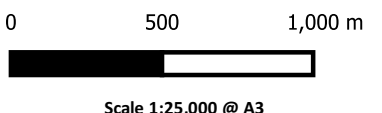
Date: 16/11/2021	Drawn by: K.M.	Checked by: P.C.	Version: Rev. 6
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Project Number: 3148

Chapter 5 Drawing 5.5 Breeding Fulmar



- KEY**
- Fulmar Apparently Occupied Nests
 - Proposed Project Site Boundary
 - Launch pad
 - 0.5km buffer launch pads
 - 1km buffer launch pads
 - 2km buffer launch pads
 - 3km buffer launch pads
 - 4km buffer launch pads



Saxavord Spaceport
 Assessment of Environmental Effects

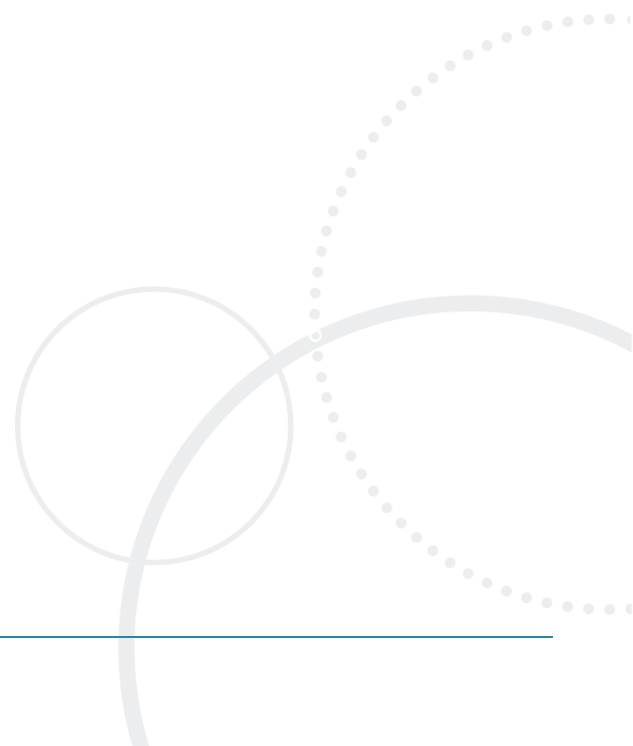
Drawing 5.5
Breeding fulmar within the Study Area

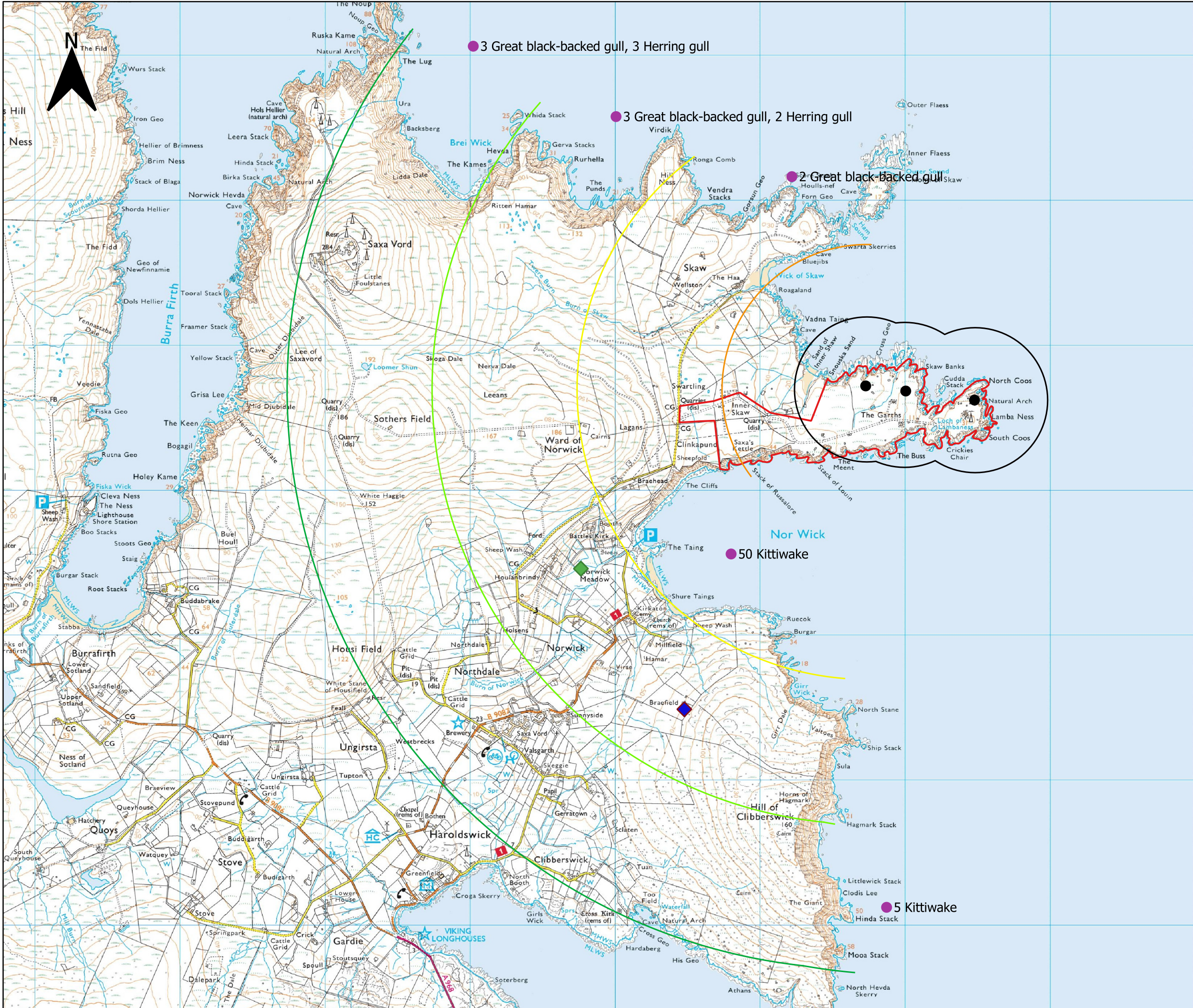
Date: 16/11/2021	Drawn by: K.M.	Checked by: P.C.	Version: Rev. 6
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Project Number: 3148



Chapter 5 Drawing 5.6 Breeding Gulls





- KEY**
- Nesting gulls (boat surveys)
 - ◆ Mixed inland gull colony
 - Lesser black-backed gull
2018 - 12 pairs
2019 - 10 pairs
 - Herring gull
2018 - 10 pairs
2019 - 16 pairs
 - Common gull
2018 - 22 pairs
2019 - 30 pairs
 - ◆ Black-headed gull colony
2018 - 11 pairs
2019 - 13 pairs
 - Proposed Project Site Boundary
 - Launch pad
 - 0.5km buffer launch pads
 - 1km buffer launch pads
 - 2km buffer launch pads
 - 3km buffer launch pads
 - 4km buffer launch pads

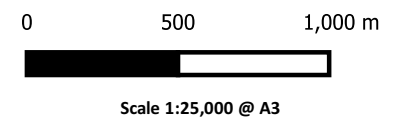
● 3 Great black-backed gull, 3 Herring gull

● 3 Great black-backed gull, 2 Herring gull

● 2 Great black-backed gull

● 50 Kittiwake

● 5 Kittiwake



Saxavord Spaceport
Assessment of Environmental Effects

Drawing 5.6
Breeding gulls within the Study Area

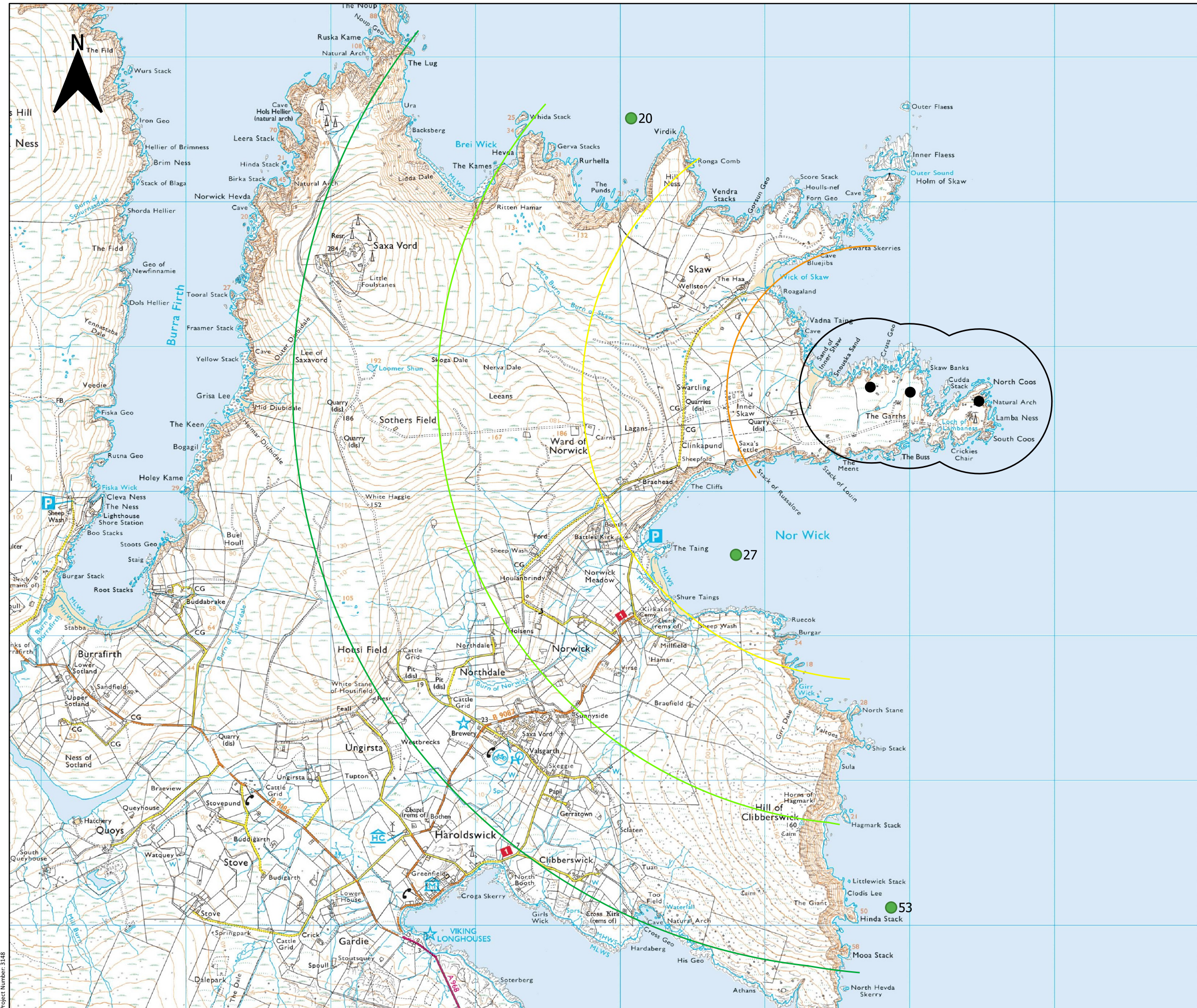
Date: 16/11/2021	Drawn by: K.M.	Checked by: P.C.	Version: Rev. 6
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Project Number: 3148



Chapter 5 Drawing 5.7 Breeding Common Guillemot





- KEY**
- Common guillemot individuals
 - Proposed Project Site Boundary
 - Launch pad
 - 0.5km buffer launch pads
 - 1km buffer launch pads
 - 2km buffer launch pads
 - 3km buffer launch pads
 - 4km buffer launch pads

0 500 1,000 m



Scale 1:25,000 @ A3



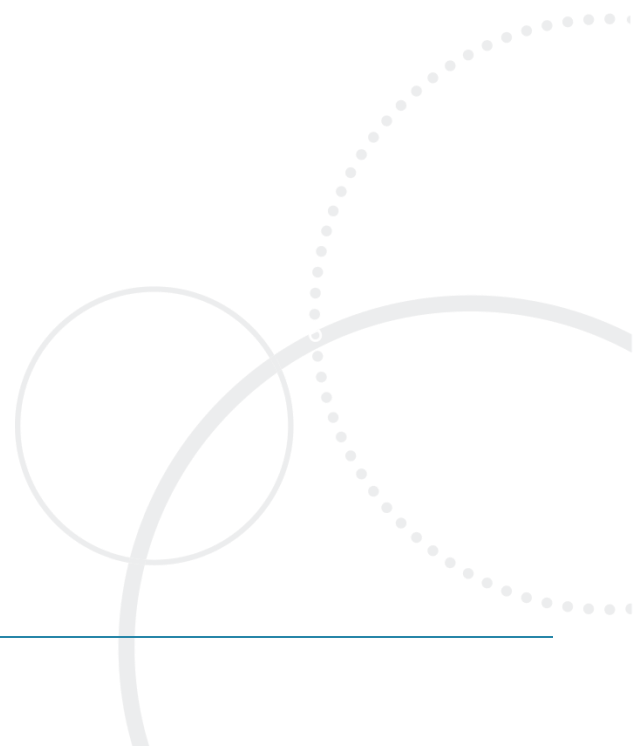
Saxavord Spaceport
 Assessment of Environmental Effects
Drawing 5.7
 Breeding common guillemot within
 the Study Area

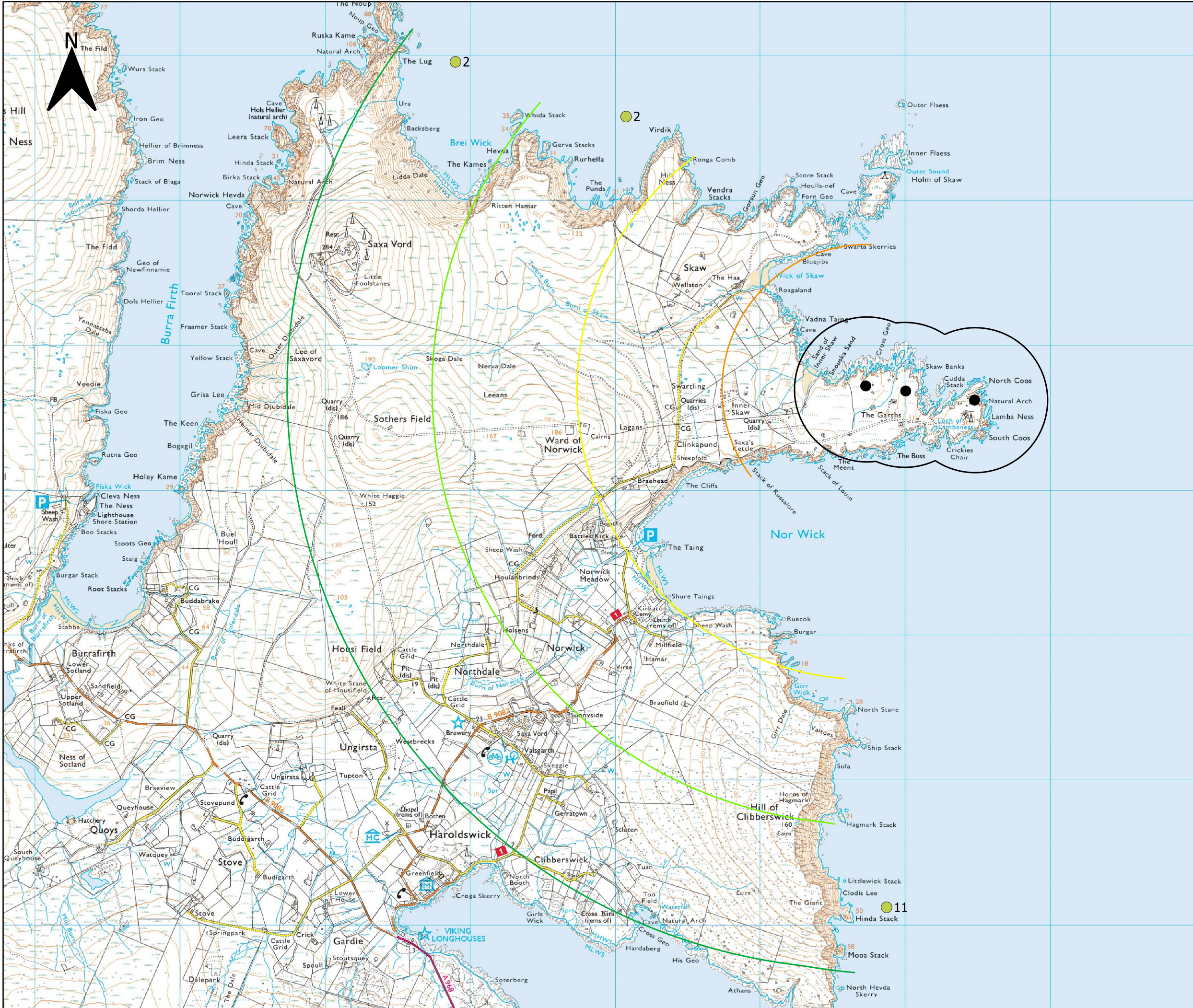
Date: 16/11/2021	Drawn by: K.M.	Checked by: P.C.	Version: Rev. 6
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Project Number: 3148

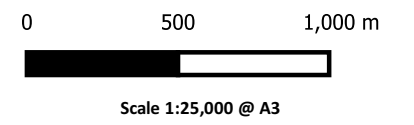
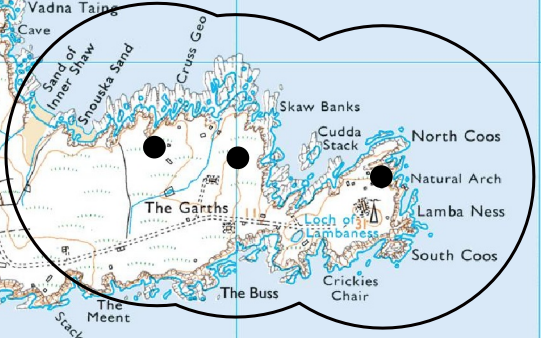


Chapter 5 Drawing 5.8 Breeding Razorbill





- KEY**
- Razorbill individuals
 - Proposed Project Site Boundary
 - Launch pad
 - 0.5km buffer launch pads
 - 1km buffer launch pads
 - 2km buffer launch pads
 - 3km buffer launch pads
 - 4km buffer launch pads



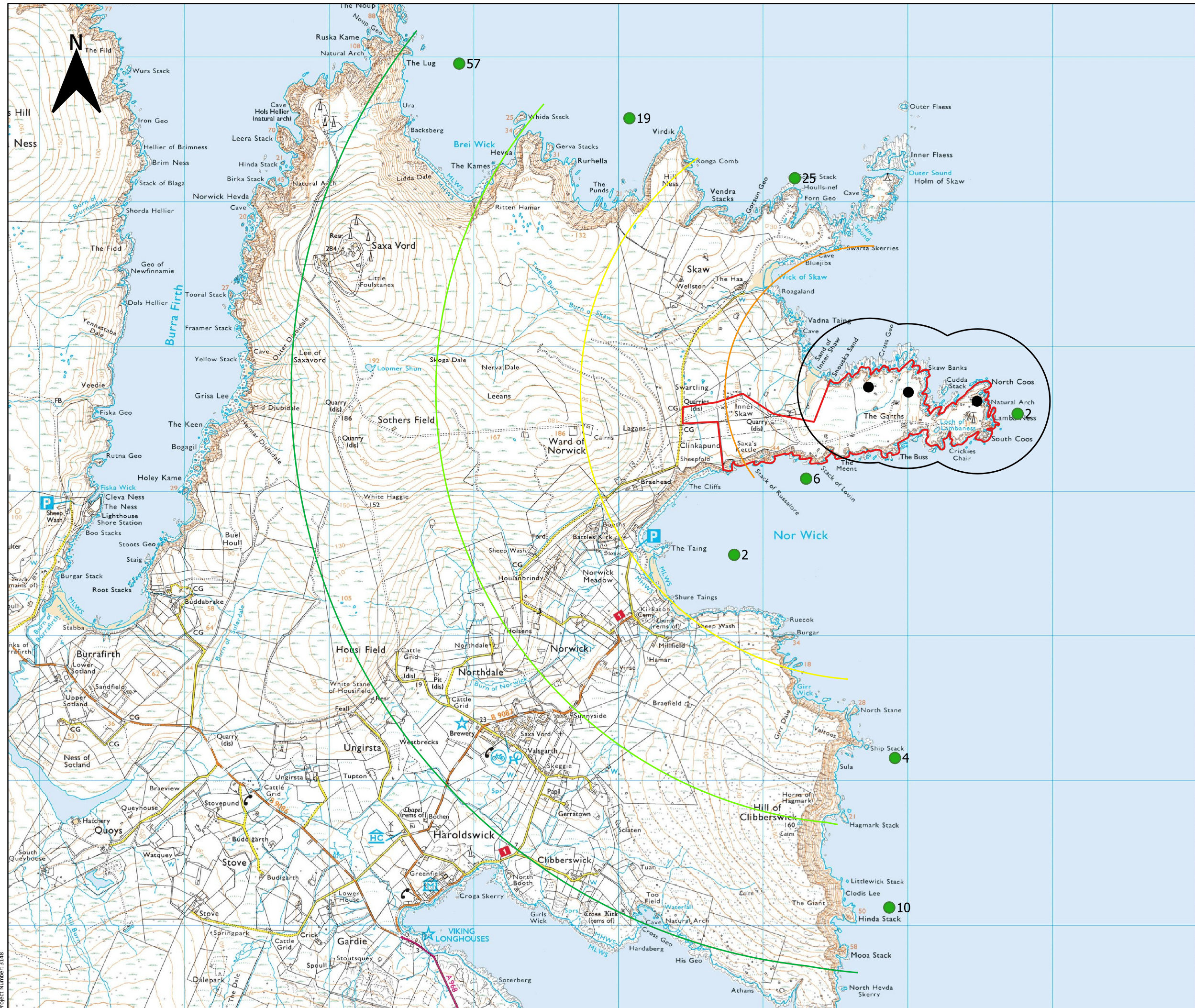
Saxa Vord Spaceport
 Assessment of Environmental Effects

Drawing 5.8
Breeding razorbill within the Study Area

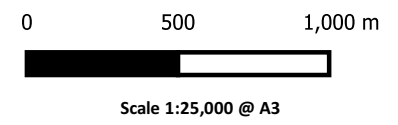
Date: 16/11/2021	Drawn by: K.M.	Checked by: P.C.	Version: Rev. 6
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Project Number: 3148

Chapter 5 Drawing 5.9 Breeding Puffin



- KEY**
- Puffin individuals
 - Proposed Project Site Boundary
 - Launch pad
 - 0.5km buffer launch pads
 - 1km buffer launch pads
 - 2km buffer launch pads
 - 3km buffer launch pads
 - 4km buffer launch pads



Saxavord Spaceport
 Assessment of Environmental Effects

Drawing 5.9
Breeding puffin within the Study Area

Date: 16/11/2021	Drawn by: K.M.	Checked by: P.C.	Version: Rev. 6
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Project Number: 3148

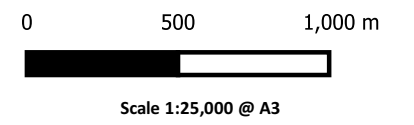


Chapter 5 Drawing 5.10 Breeding Ringed Plover within the Study Area



KEY

- 2018
- ★ 2019
- Proposed Project Site Boundary
- Launch pad
- 0.5km buffer launch pads
- 1km buffer launch pads
- 2km buffer launch pads
- 3km buffer launch pads
- 4km buffer launch pads



Saxa Vord Spaceport
 Assessment of Environmental Effects

Drawing 5.10
Breeding ringed plover within the Study Area

Date: 16/11/2021	Drawn by: K.M.	Checked by: P.C.	Version: Rev. 6
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Project Number: 3148

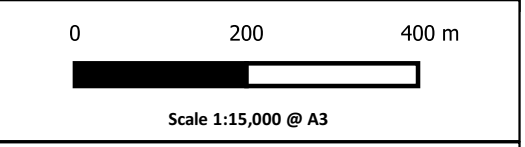


Chapter 5 Drawing 5.11 Breeding Ringed Plover within the Proposed Project Boundary



KEY

- Ringed plover territory centre
- 2018
- ★ 2019
- Spaceport design layout
- Infrastructure/building
- ▣ Fenced launch pad area
- Road
- Construction compound
- Temporary construction compound
- Track to wildlife hide
- Wildlife hide
- Launch pad
- - - Fence
- Proposed Project Site Boundary



Saxa Vord Spaceport
 Assessment of Environmental Effects

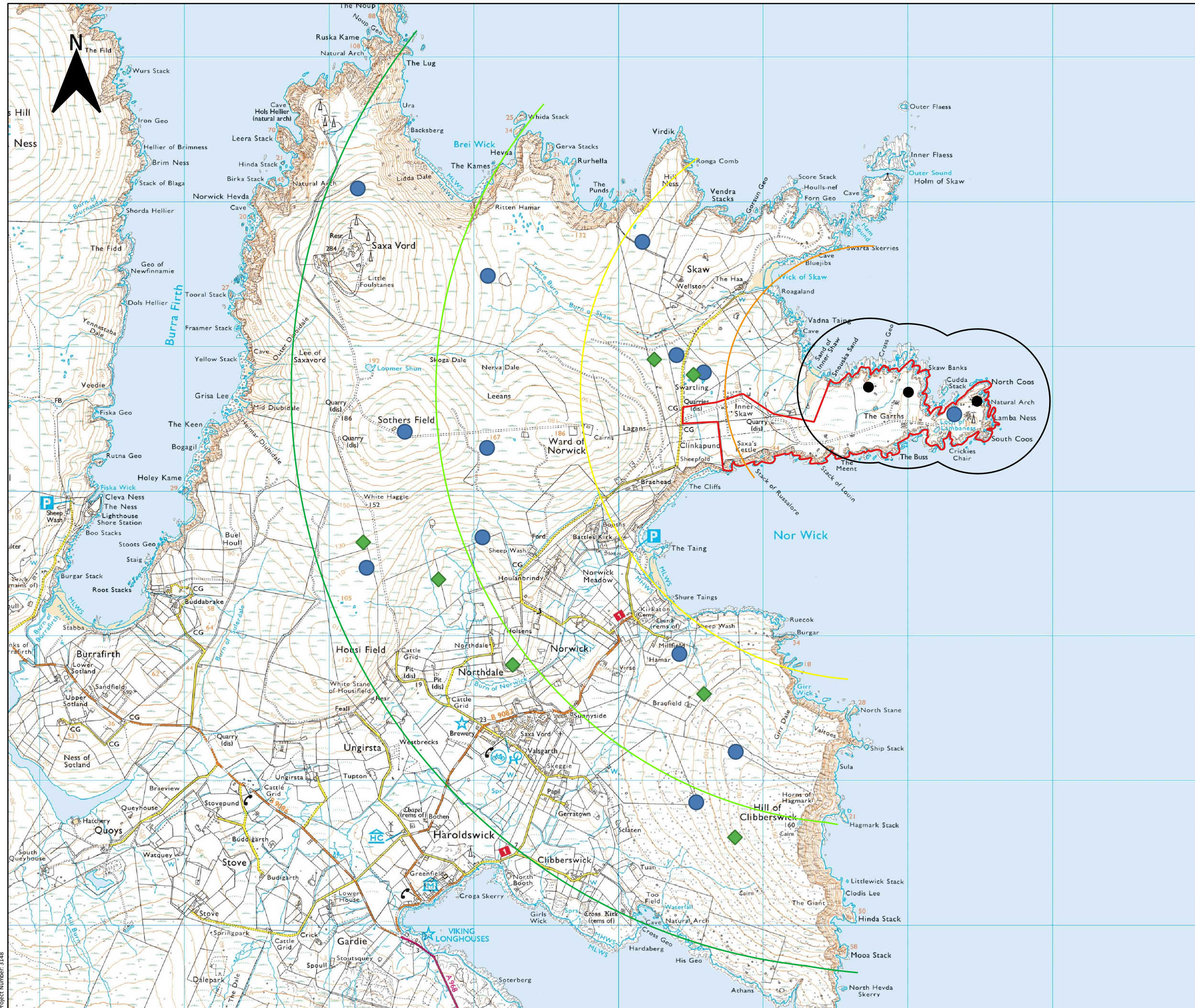
Drawing 5.11
Breeding ringed plover within the
Proposed Project Boundary

Date: 16/11/2021	Drawn by: K.M.	Checked by: P.C.	Version: Rev. 6
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Project Number: 3148

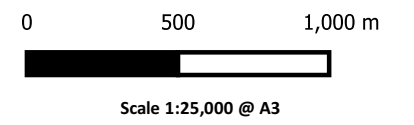


Chapter 5 Drawing 5.12 Breeding Golden Plover within the Study Area



KEY

- ◆ Golden plover territory centre
- 2018
- 2019
- Proposed Project Site Boundary
- Launch pad
- 0.5km buffer launch pads
- 1km buffer launch pads
- 2km buffer launch pads
- 3km buffer launch pads
- 4km buffer launch pads



Saxa Vord Spaceport
 Assessment of Environmental Effectst
Drawing 5.12
Breeding golden plover within the
Study Area

Date: 16/11/2021	Drawn by: K.M.	Checked by: P.C.	Version: Rev. 6
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Project Number: 3148

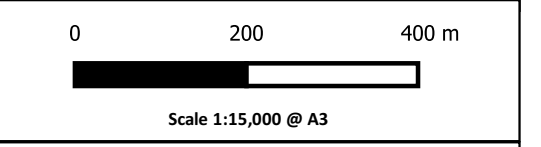


Chapter 5 Drawing 5.13 Breeding Golden Plover within the Proposed Project Boundary



KEY

- Golden plover territory centre
- ◆ 2018
- 2019
- Spaceport design layout
- Infrastructure/building
- ▣ Fenced launch pad area
- Road
- Construction compound
- Temporary construction compound
- Track to wildlife hide
- Wildlife hide
- Launch pad
- - - Fence
- Proposed Project Site Boundary



Saxa Vord Spaceport
 Assessment of Environmental Effects

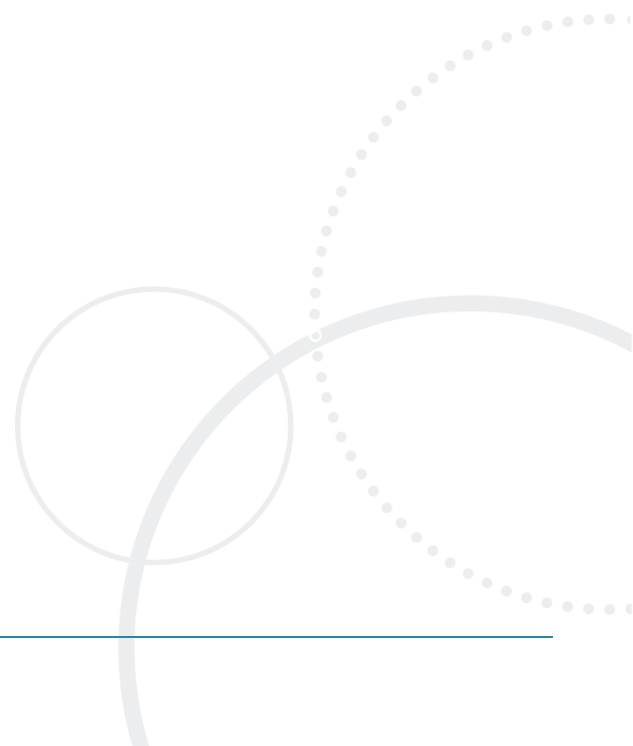
Drawing 5.13
Breeding golden plover within the
Proposed Project Boundary

Date: 16/11/2021	Drawn by: K.M.	Checked by: P.C.	Version: Rev. 6
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Project Number: 3148



Chapter 5 Drawing 5.14 Breeding Curlew within the Study Area





- KEY**
- Curlew territory centre
 - 2019
 - ◆ 2018
 - Proposed Project Site Boundary
 - Launch pad
 - 0.5km buffer launch pads
 - 1km buffer launch pads
 - 2km buffer launch pads
 - 3km buffer launch pads
 - 4km buffer launch pads

0 500 1,000 m



Scale 1:25,000 @ A3



Saxavord Spaceport
Assessment of Environmental Effects

Drawing 5.14
Breeding curlew within the Study Area

Date: 16/11/2021	Drawn by: K.M.	Checked by: P.C.	Version: Rev. 6
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Project Number: 3148



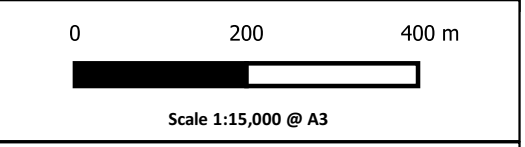
Chapter 5 Drawing 5.15 Breeding Curlew within the Proposed Project Boundary





KEY

- Curlew territory centre
- 2019
- ◆ 2018
- Spaceport design layout
- Infrastructure/building
- ▣ Fenced launch pad area
- Road
- Construction compound
- Temporary construction compound
- Track to wildlife hide
- Wildlife hide
- Launch pad
- - - Fence
- Proposed Project Site Boundary



Saxa Vord Spaceport
 Assessment of Environmental Effects

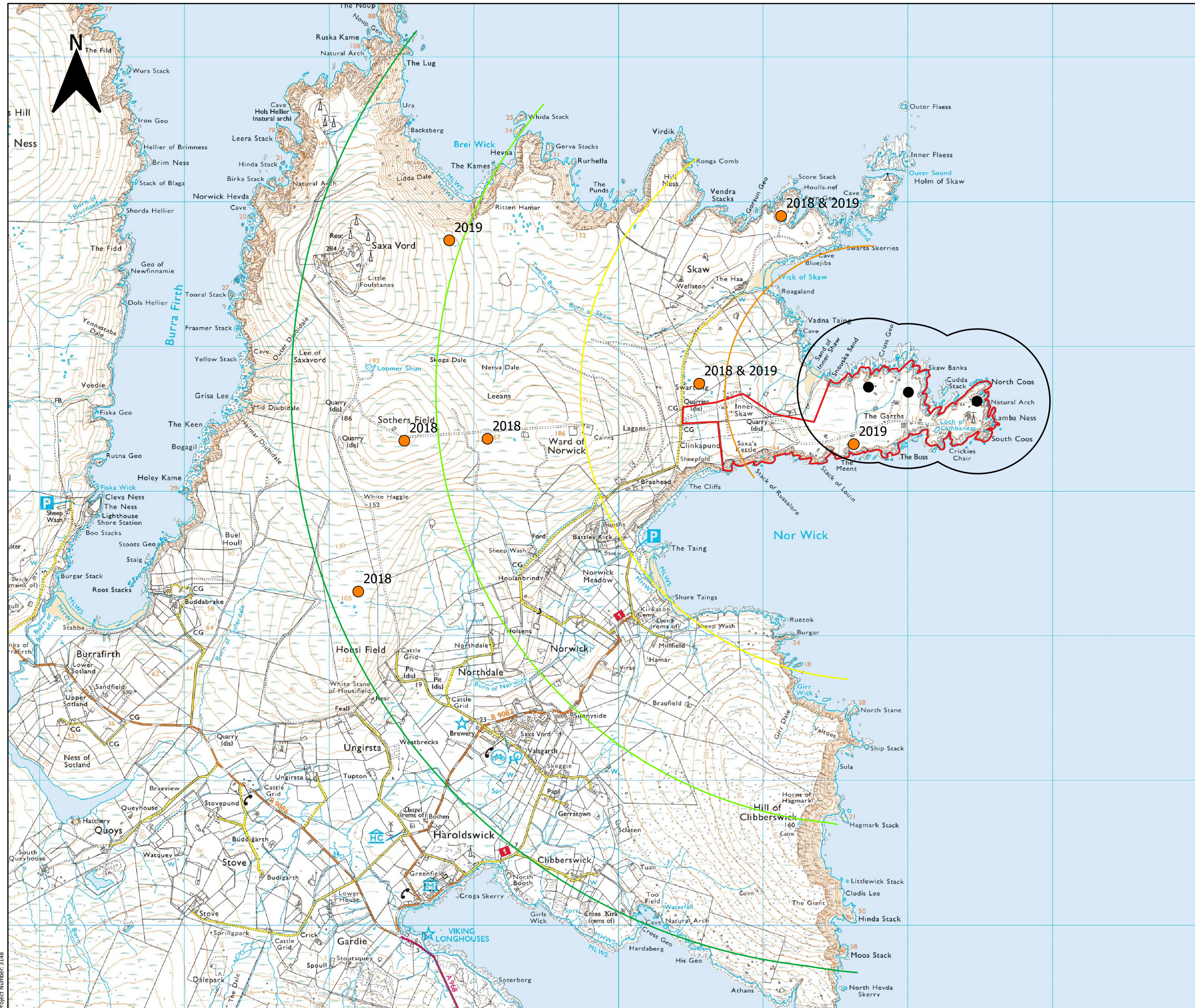
Drawing 5.15
Breeding curlew within the
Proposed Project Boundary

Date: 16/11/2021	Drawn by: K.M.	Checked by: P.C.	Version: Rev. 6
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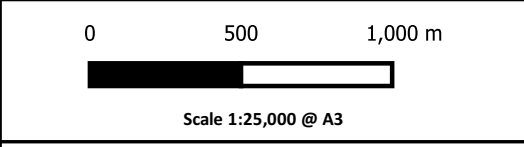
Project Number: 3148



Chapter 5 Drawing 5.16 Breeding Dunlin within the Study Area



- KEY**
- Dunlin territory centre
 - Proposed Project Site Boundary
 - Launch pad
 - 0.5km buffer launch pads
 - 1km buffer launch pads
 - 2km buffer launch pads
 - 3km buffer launch pads
 - 4km buffer launch pads



Saxa Vord Spaceport
 Assessment of Environmental Effects

Drawing 5.16
Breeding dunlin within the Study Area

Date: 16/11/2021	Drawn by: K.M.	Checked by: P.C.	Version: Rev. 6
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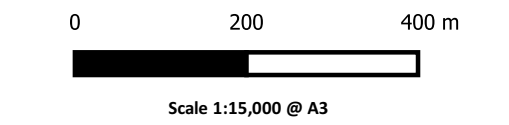
Project Number: 3148



Chapter 5 Drawing 5.17 Breeding Dunlin within the Proposed Project Boundary



- KEY**
- Dunlin territory centre
 - Spaceport design layout**
 - Infrastructure/building
 - Fenced launch pad area
 - Road
 - Construction compound
 - Temporary construction compound
 - Track to wildlife hide
 - Wildlife hide
 - Launch pad
 - Fence
 - Proposed Project Site Boundary



Saxa Vord Spaceport
 Assessment of Environmental Effects

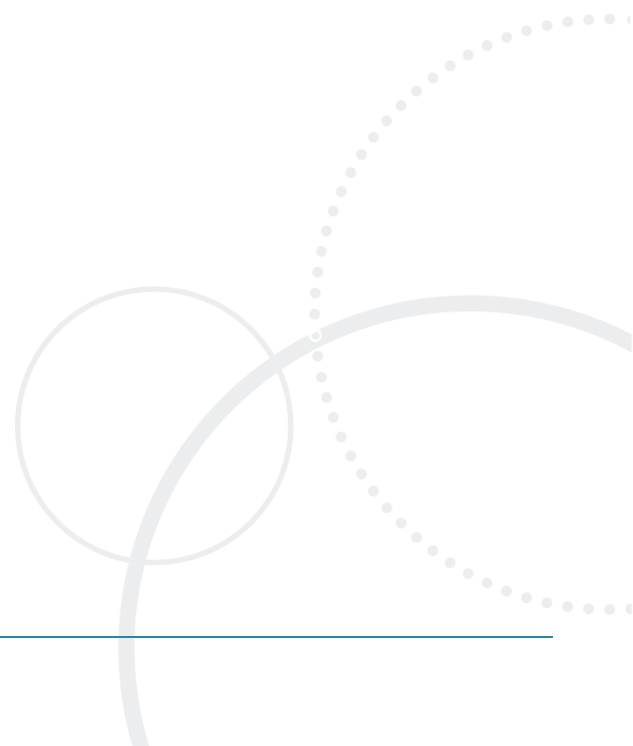
Drawing 5.17
Breeding dunlin within the
Proposed Project Boundary

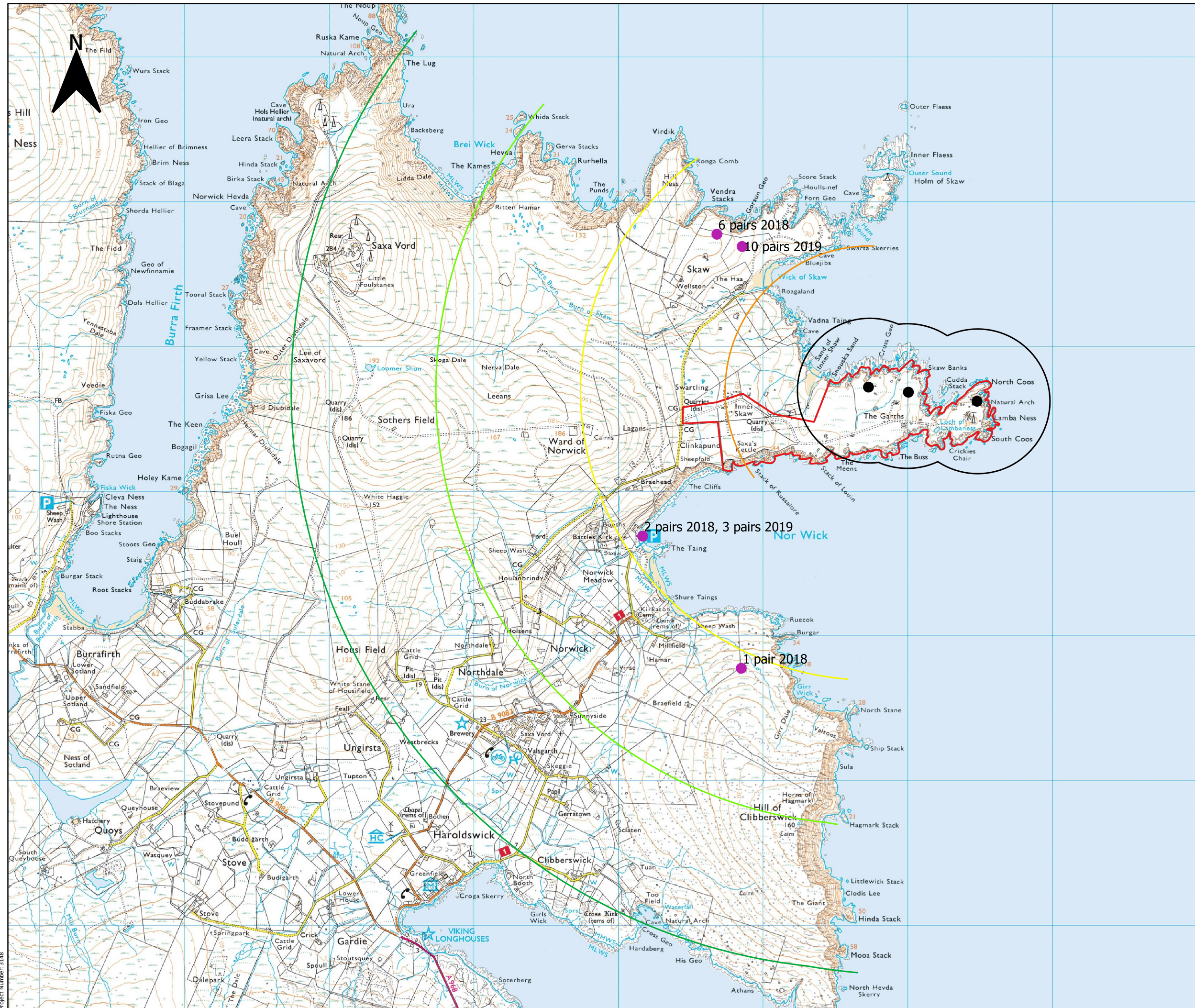
Date: 16/11/2021	Drawn by: K.M.	Checked by: P.C.	Version: Rev. 6
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Project Number: 3148

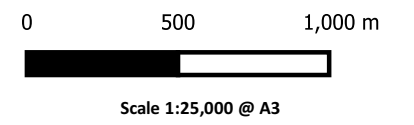


Chapter 5 Drawing 5.18 Breeding Arctic Tern





- KEY**
- Arctic tern nests
 - Proposed Project Site Boundary
 - Launch pad
 - 0.5km buffer launch pads
 - 1km buffer launch pads
 - 2km buffer launch pads
 - 3km buffer launch pads
 - 4km buffer launch pads



Saxavord Spaceport
 Assessment of Environmental Effects

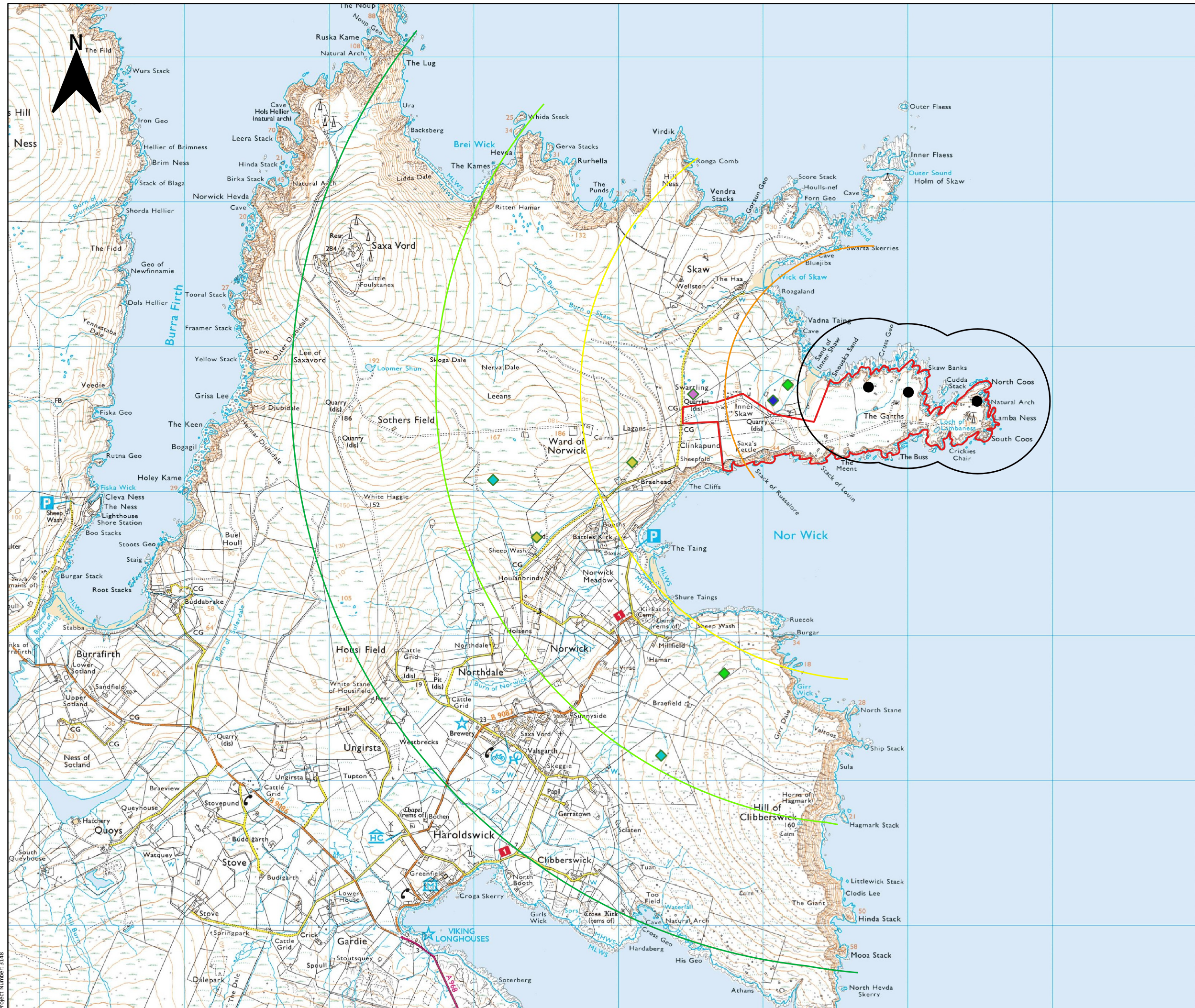
Drawing 5.18
Breeding arctic tern within the Study Area

Date: 16/11/2021	Drawn by: K.M.	Checked by: P.C.	Version: Rev. 6
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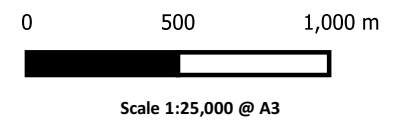
Project Number: 3148



Chapter 5 Drawing 5.19 Breeding Arctic Skua within Study Area



- KEY**
- Arctic skua territory centre
 - ◆ 1 pair 2018 and 19 2 pair 2020
 - ◆ 2018
 - ◆ 2018 & 2019
 - ◆ 2019
 - ◆ 2020
 - Proposed Project Site Boundary
 - Launch pad
 - 0.5km buffer launch pads
 - 1km buffer launch pads
 - 2km buffer launch pads
 - 3km buffer launch pads
 - 4km buffer launch pads



Saxavord Spaceport
 Assessment of Environmental Effects

Drawing 5.19
Breeding arctic skua within the Study Area

Date: 16/11/2021	Drawn by: K.M.	Checked by: P.C.	Version: Rev. 6
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Project Number: 3148



Chapter 5 Drawing 5.20 Breeding Arctic Skua within the Proposed Project Boundary



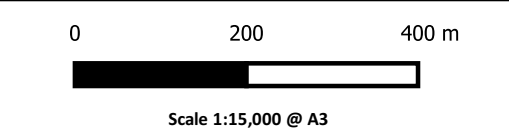
KEY

Arctic skua territory centre

- ◆ 1 pair 2018 and 19 2 pair 2020
- ◆ 2018
- ◆ 2018 & 2019
- ◆ 2019
- ◆ 2020

Spaceport design layout

- Infrastructure/building
- Fenced launch pad area
- Road
- Construction compound
- Temporary construction compound
- Track to wildlife hide
- Wildlife hide
- Launch pad
- Fence
- Proposed Project Site Boundary



Saxa Vord Spaceport
Assessment of Environmental Effects

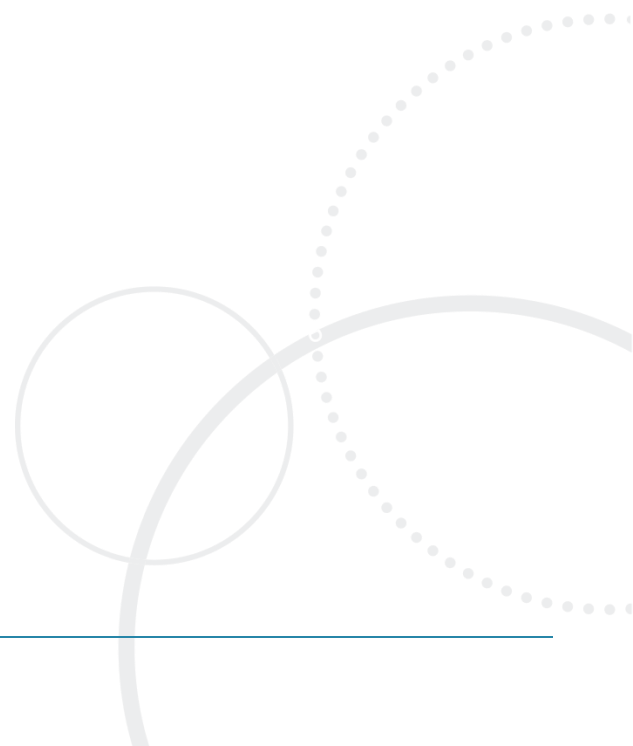
Drawing 5.20
Breeding arctic skua within the
Proposed Project Boundary

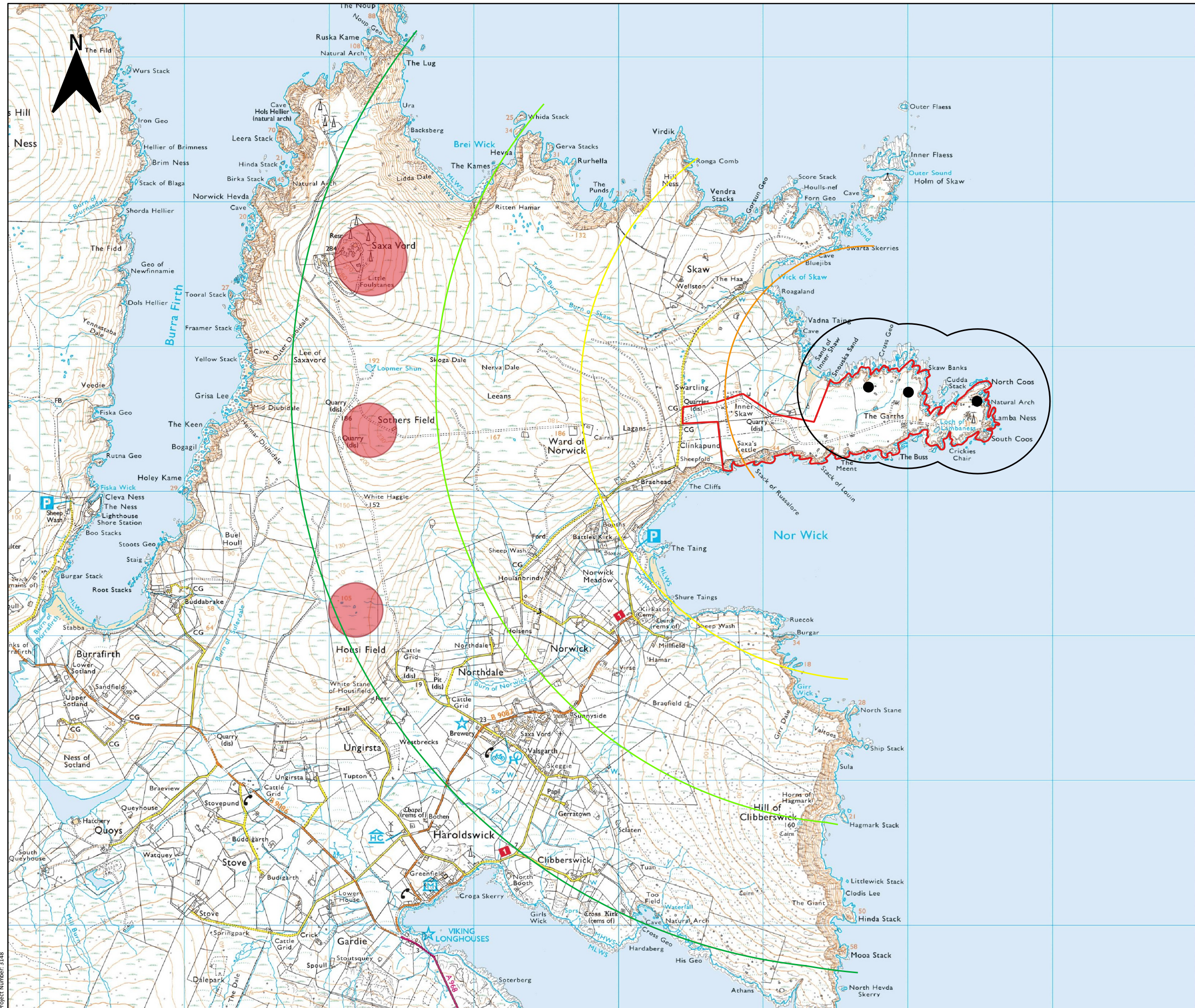
Date: 16/11/2021	Drawn by: K.M.	Checked by: P.C.	Version: Rev. 6
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Project Number: 3148

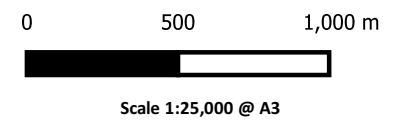


Chapter 5 Drawing 5.21 Breeding Great Skua





- KEY**
- Main great skua breeding areas
 - Proposed Project Site Boundary
 - Launch pad
 - 0.5km buffer launch pads
 - 1km buffer launch pads
 - 2km buffer launch pads
 - 3km buffer launch pads
 - 4km buffer launch pads



Saxavord Spaceport
 Assessment of Environmental Effects

Drawing 5.21
Breeding great skua within the Study Area

Date: 16/11/2021	Drawn by: K.M.	Checked by: P.C.	Version: Rev. 7
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Project Number: 3148