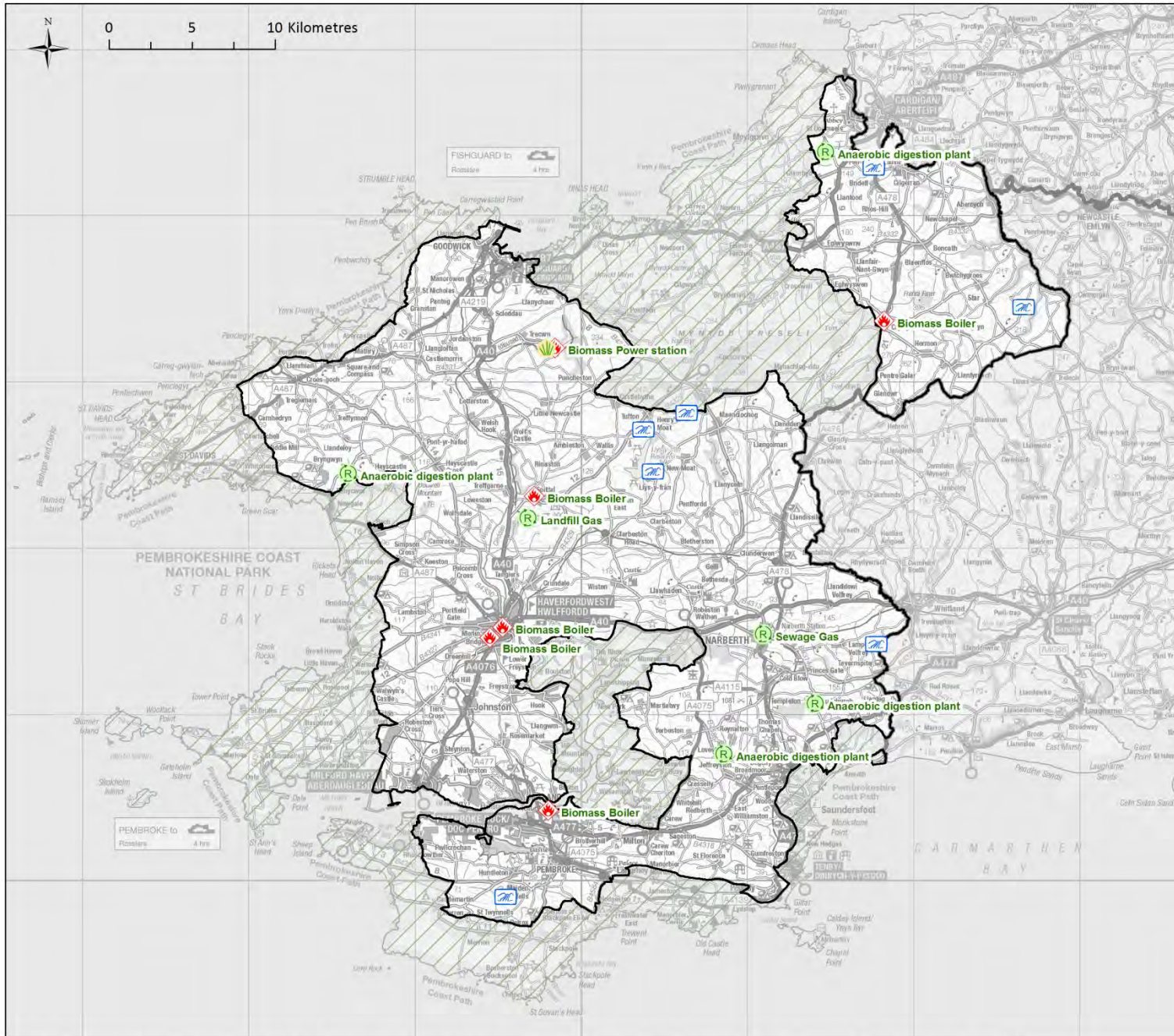


APPENDIX 2 - GIS MAPS

Contents:

- Existing renewables
- Wind
- Wood fuel
- Solar
- Heat Mapping



Existing & Proposed LZC Energy Technologies

Other existing renewable electricity and heat facilities

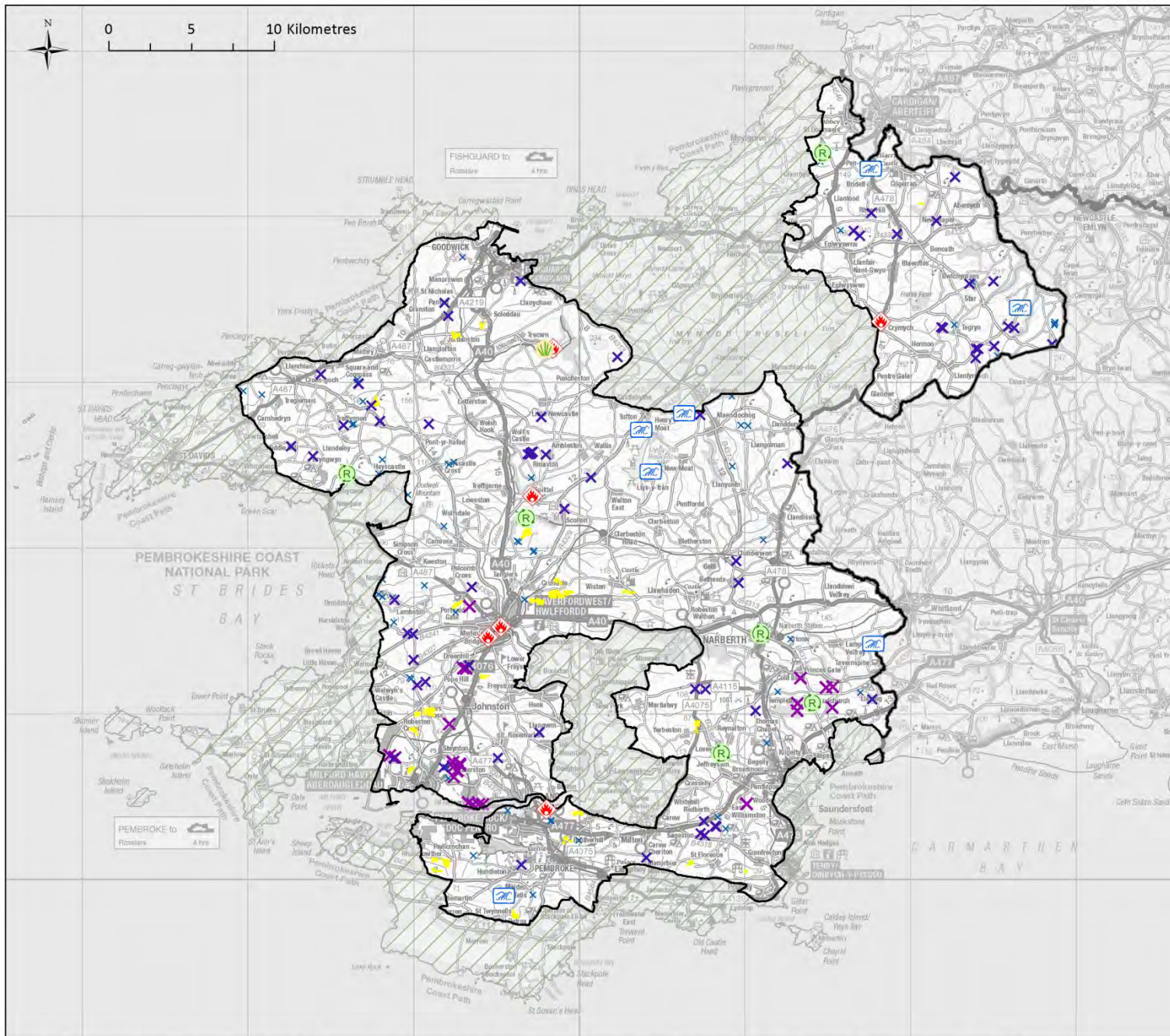
Key

- Pembrokeshire only
- Pembrokeshire Coast Nat. Park
- Local Authority Boundary
- Biomass
- Energy from Waste
- Hydro
- Renewable Heat Capacity

Date: 15 - 03 - 2017

Version: 1





Existing & Proposed LZC Energy Technologies

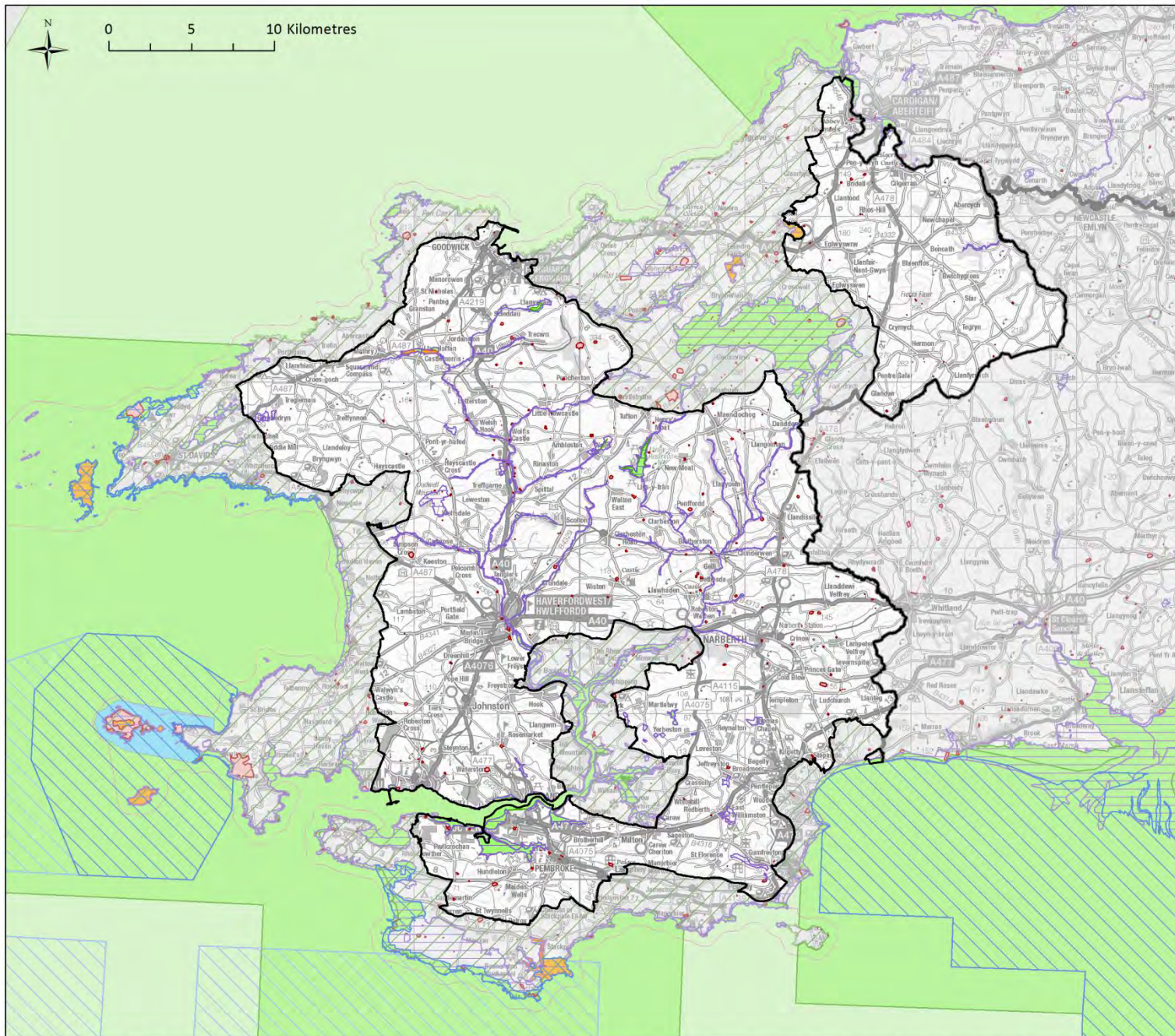
All existing renewable electricity and heat

Key

- Pembrokeshire only
- Pembrokeshire Coast Nat. Park
- Local Authority Boundary
- Biomass
- Energy from Waste
- Hydro
- Renewable Heat Capacity
- Solar PV Arrays
- Wind Turbines**
 - Large
 - Medium
 - Small

Date: 15 - 03 - 2017
Version: 1
















Wind Energy Resource Assessment

Environmental and heritage constraints

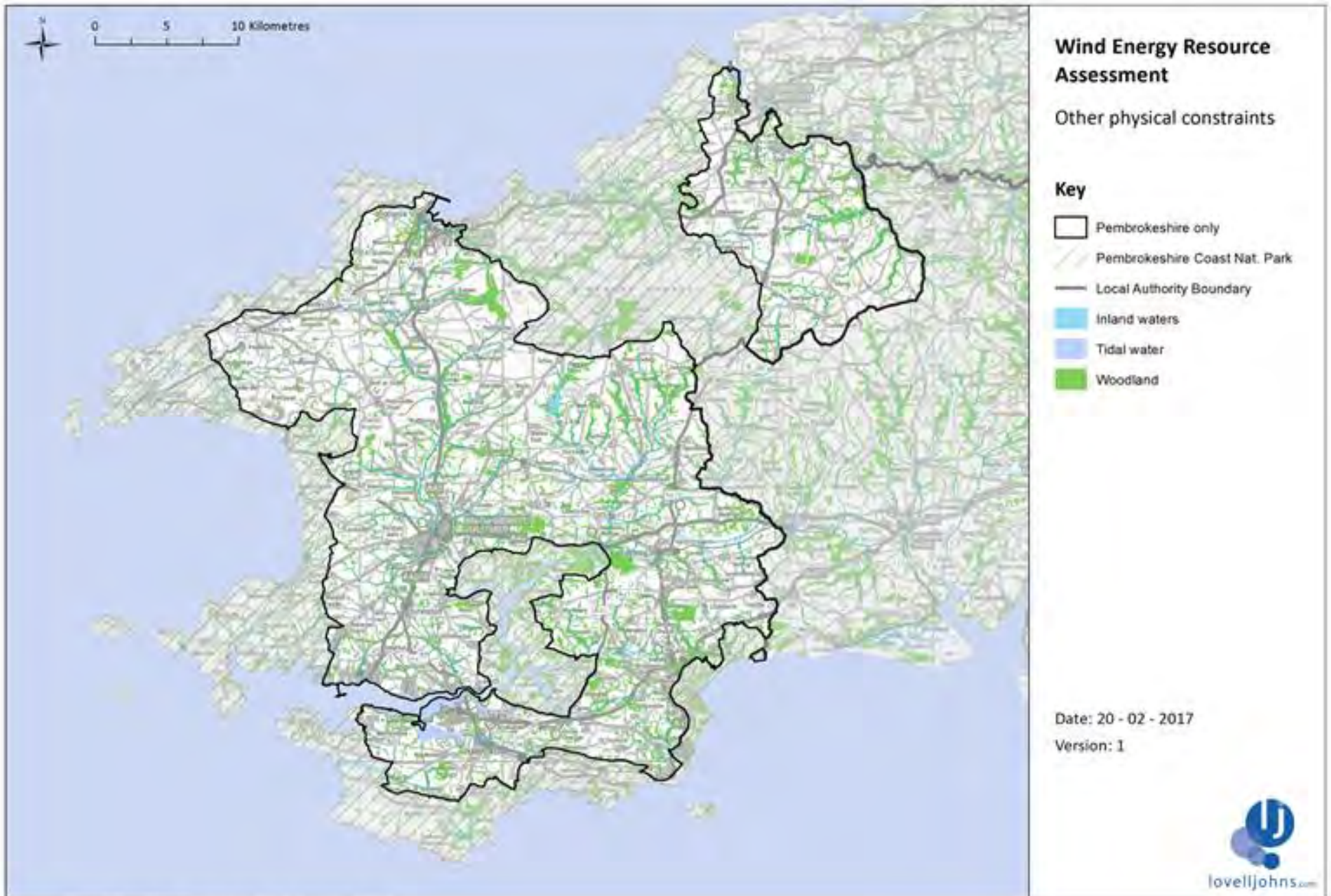
Key

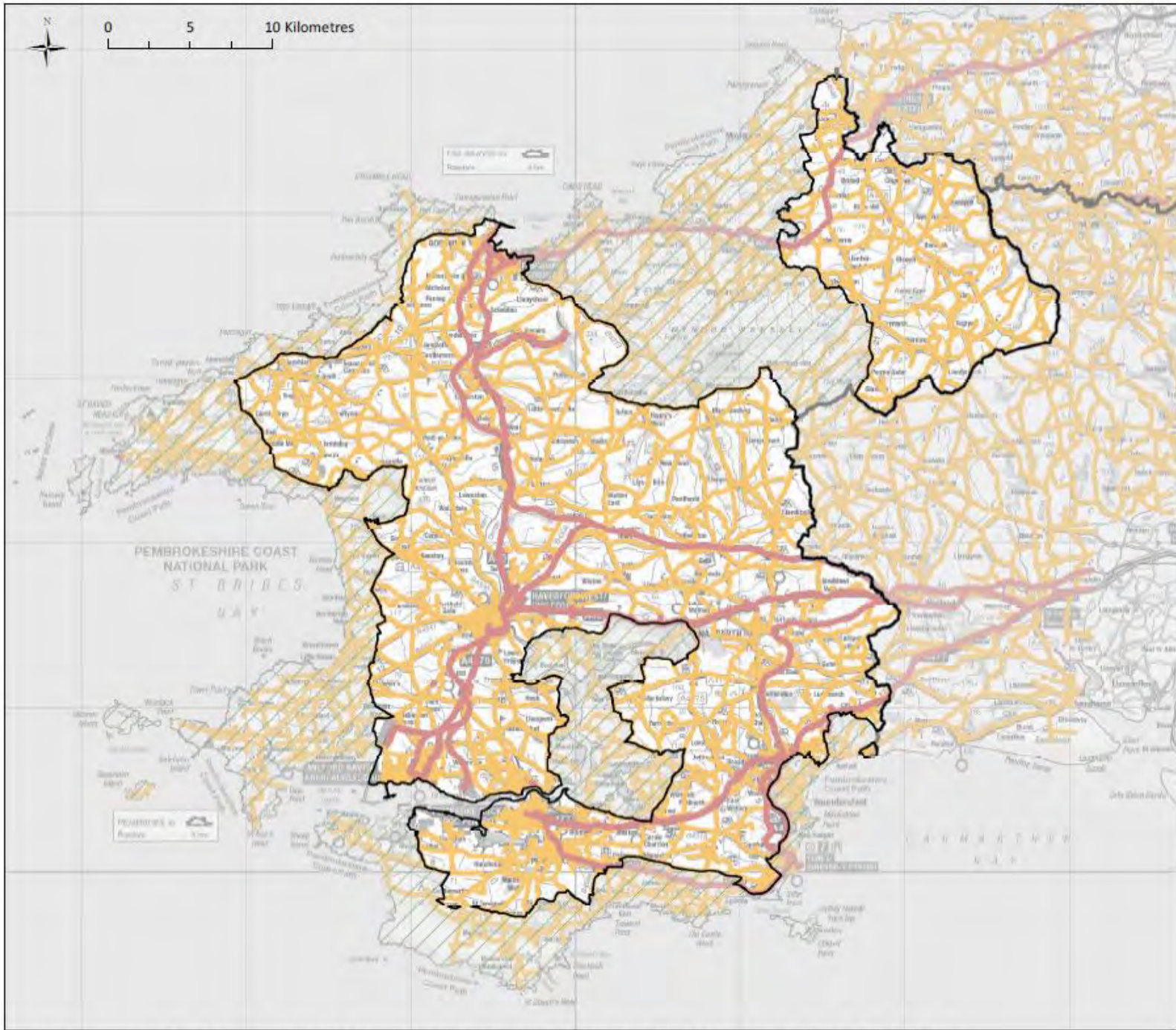
-  Pembrokeshire only
-  Pembrokeshire Coast Nat. Park
-  Local Authority Boundary
-  Special Protection Area
-  Proposed SPA
-  Site of Special Scientific Interest
-  Scheduled Ancient Monument
-  National Nature Reserve
-  Heritage Coast
-  Marine Conservation Zone
-  Special Area of Conservation
-  Proposed SAC

Date: 18 - 04 - 2017

Version: 2












Wind Energy Resource Assessment

Transport infrastructure exclusion zones

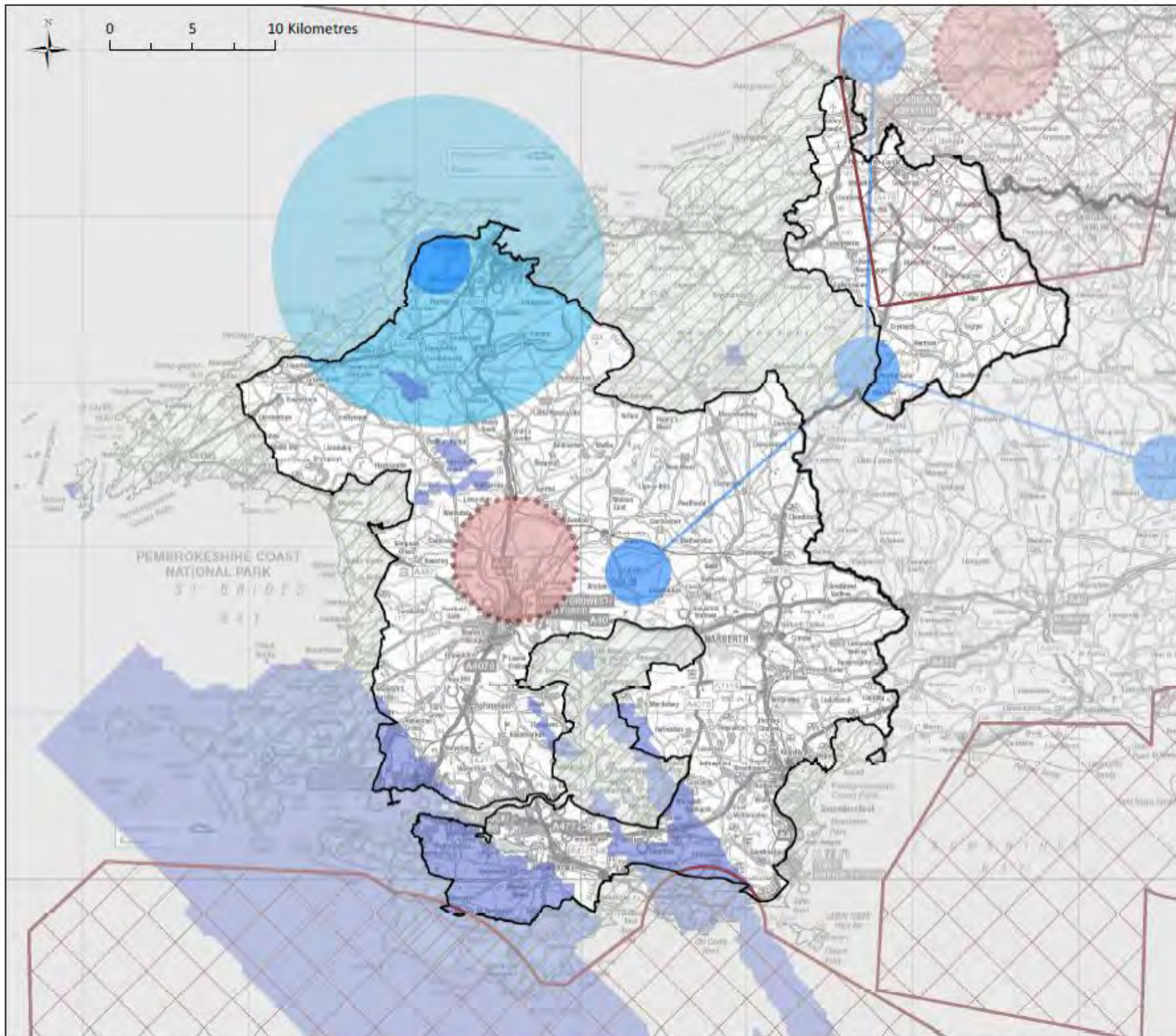
Key

-  Pembrokeshire only
-  Pembrokeshire Coast Nat. Park
-  Local Authority Boundary
-  Principal transport network
-  Secondary transport network

Date: 21 - 02 - 2017

Version: 1





Wind Energy Resource Assessment

Aviation & radar constraints for 120m blade tip height

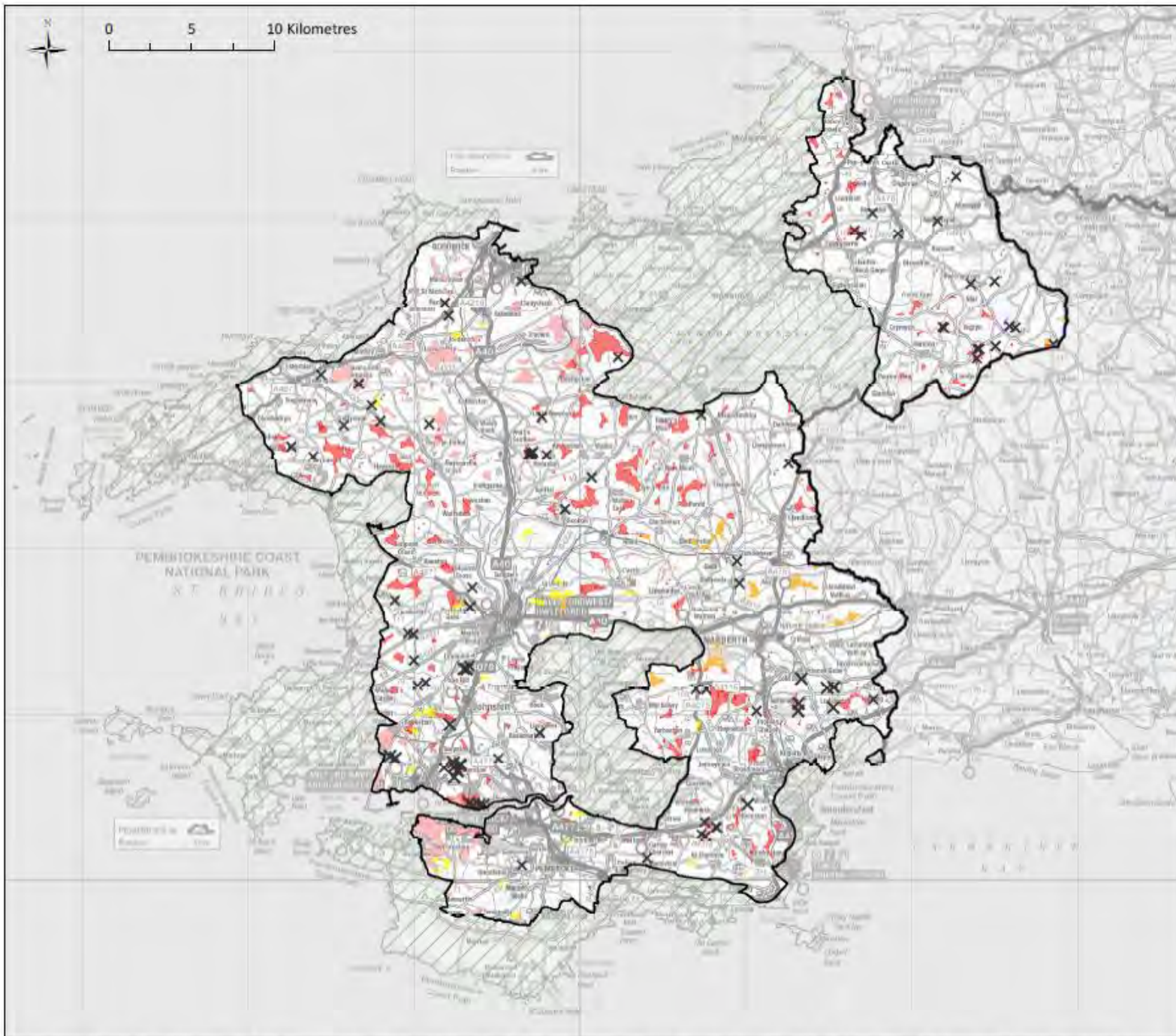
Key

-  Pembrokeshire only
-  Pembrokeshire Coast Nat. Park
-  Local Authority Boundary
-  Aerodrome Traffic Zone
-  Controlled airspace
-  Potential for NERL interference
-  Secondary Surveillance Radar
-  Navigation Aids

Date: 20 - 02 - 2017

Version: 1








Wind Energy Resource Assessment

Wind energy potential and existing resource

Key




-  Pembrokeshire only
-  Pembrokeshire Coast Nat. Park
-  Local Authority Boundary

Wind Turbines

-  Large
-  Medium
-  Solar PV Arrays

Wind resource priority

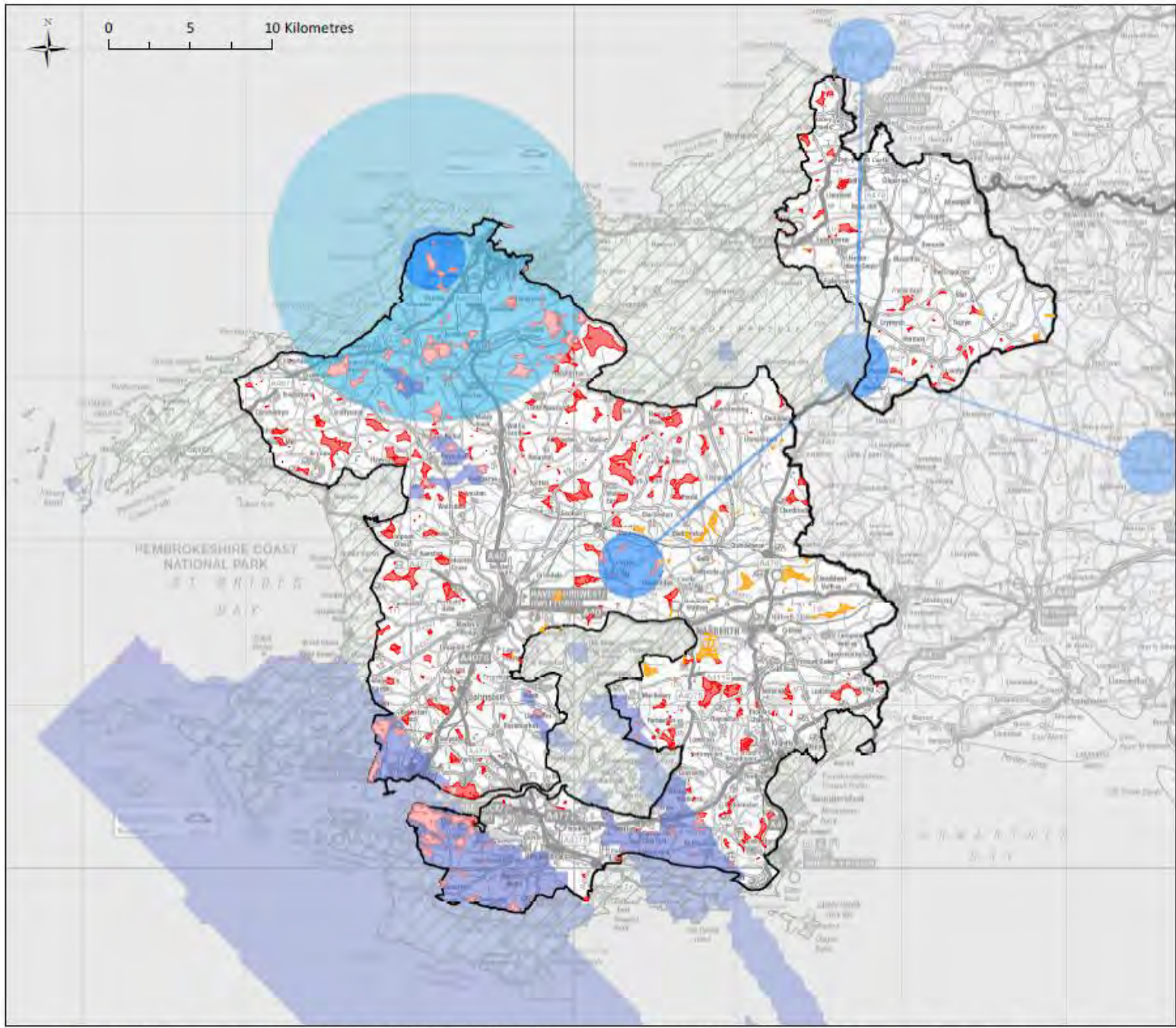
Wind speed, Current NATS risk

-  High >6.5 m/s, No risk
-  Moderate 6-6.5 m/s, No risk
-  High >6.5 m/s, NATS risk
-  Moderate 6-6.5 m/s, NATS risk

Date: 23 - 02 - 2017

Version: 1





Wind Energy Resource Assessment

Unconstrained areas with wind energy potential

Key

- Pembrokeshire only
- Pembrokeshire Coast Nat. Park
- Local Authority Boundary
- Potential for NERL interference
- Secondary Surveillance Radar
- Navigation Aids

Wind resource priority

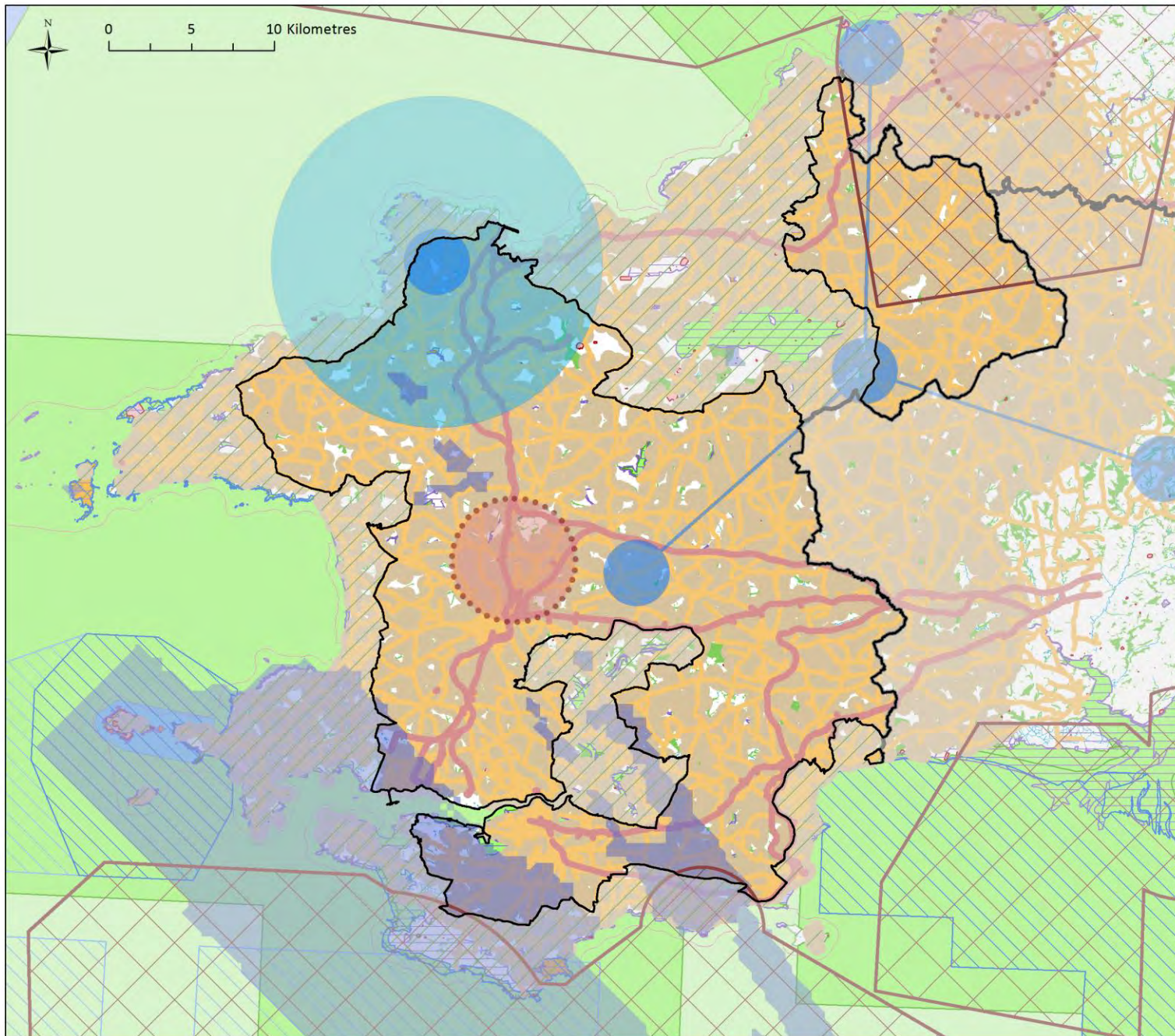
Wind speed, Current NATS risk

- High >6.5 m/s, No risk
- Moderate 6-6.5 m/s, No risk
- High >6.5 m/s, NATS risk
- Moderate 6-6.5 m/s, NATS risk

Date: 22 - 02 - 2017

Version: 1





Wind Energy Resource Assessment

All applicable wind energy constraints

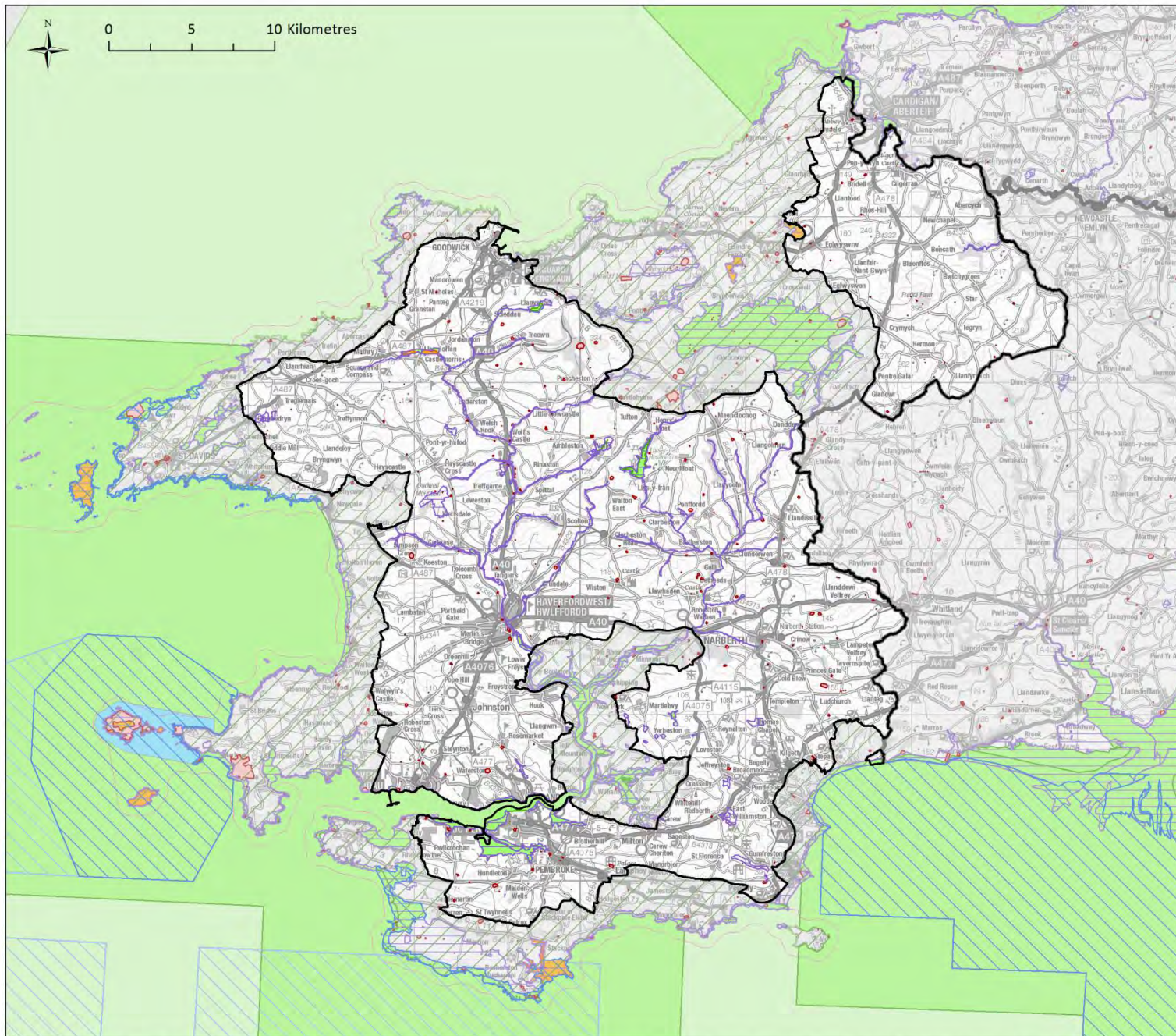
Key

-  Pembrokeshire only
-  Pembrokeshire Coast Nat. Park
-  Local Authority Boundary
-  Aerodrome Traffic Zone
-  Controlled airspace
-  Potential for NERL interference
-  Secondary Surveillance Radar
-  Navigation Aids
-  Principal transport network
-  Secondary transport network
-  500m Noise Buffer
-  Site of Special Scientific Interest
-  Scheduled Ancient Monument
-  Special Area of Conservation
-  Woodland
-  Inland waters

Date: 18 - 04 - 2017

Version: 2

















Wood Fuel and Energy Crops Resource

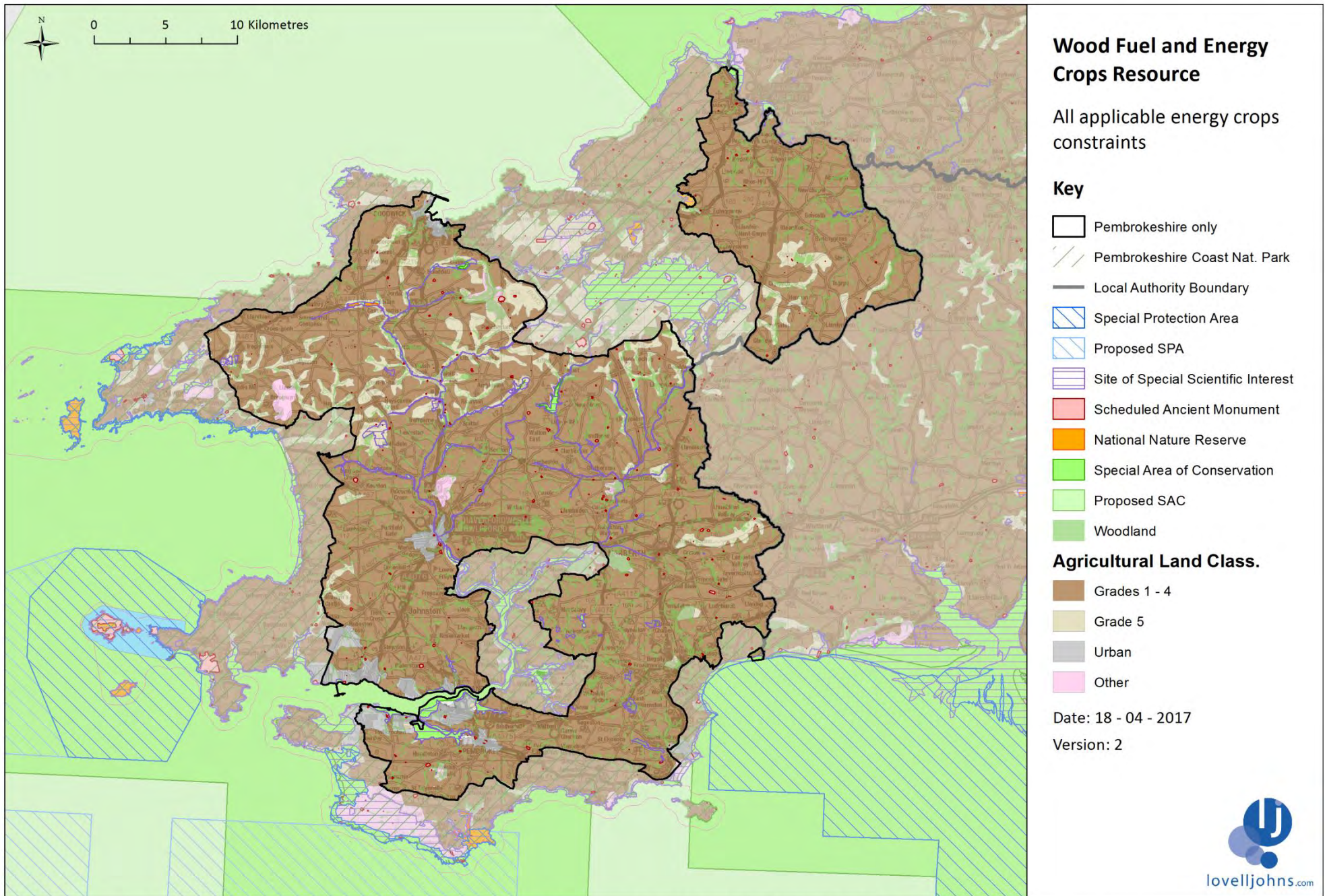
Environmental and heritage constraints

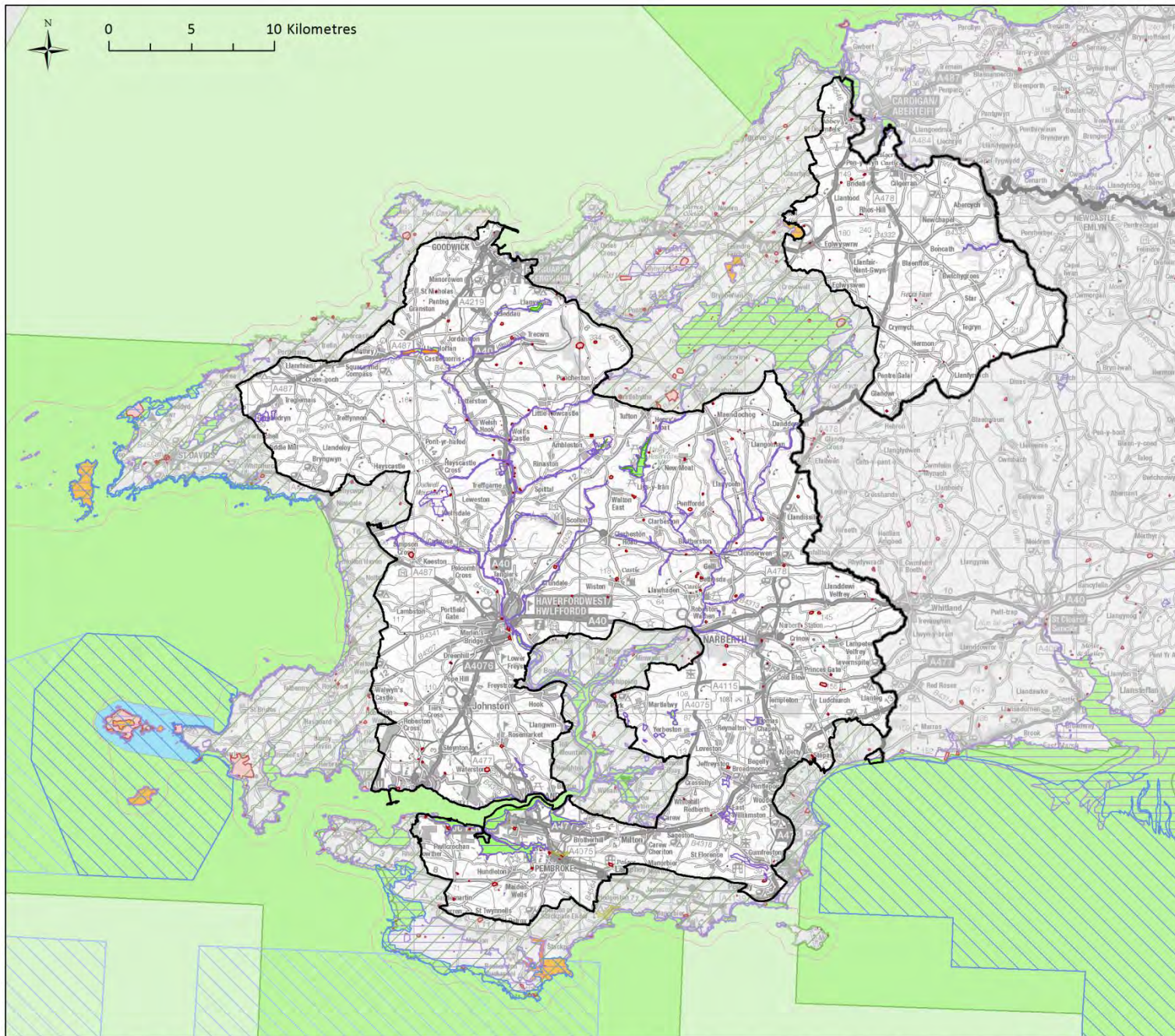
Key

-  Pembrokeshire only
-  Pembrokeshire Coast Nat. Park
-  Local Authority Boundary
-  Special Protection Area
-  Proposed SPA
-  Site of Special Scientific Interest
-  Scheduled Ancient Monument
-  National Nature Reserve
-  Heritage Coast
-  Marine Conservation Zone
-  Special Area of Conservation
-  Proposed SAC

Date: 18 - 04 - 2017

Version: 2





Solar Photovoltaic Farm Resource Assessment

Environmental and heritage constraints

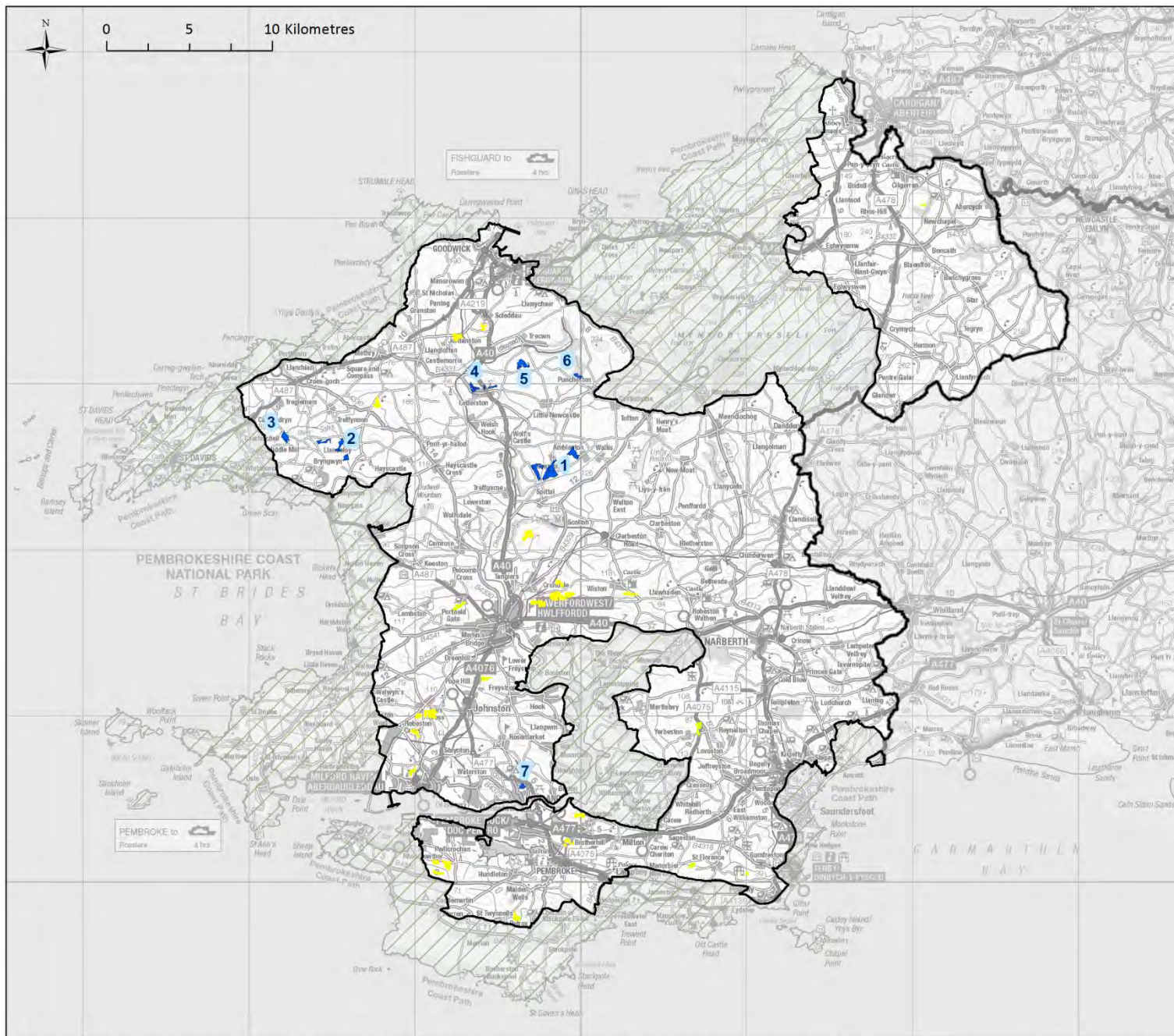
Key

-  Pembrokeshire only
-  Pembrokeshire Coast Nat. Park
-  Local Authority Boundary
-  Special Protection Area
-  Proposed SPA
-  Site of Special Scientific Interest
-  Scheduled Ancient Monument
-  National Nature Reserve
-  Local Nature Reserve
-  Heritage Coast
-  Marine Conservation Zone
-  Special Area of Conservation
-  Proposed SAC

Date: 18 - 04 - 2017

Version: 2










Solar Photovoltaic Farm Resource Assessment

Unconstrained land parcels over 1.2 Ha (with LANDMAP)

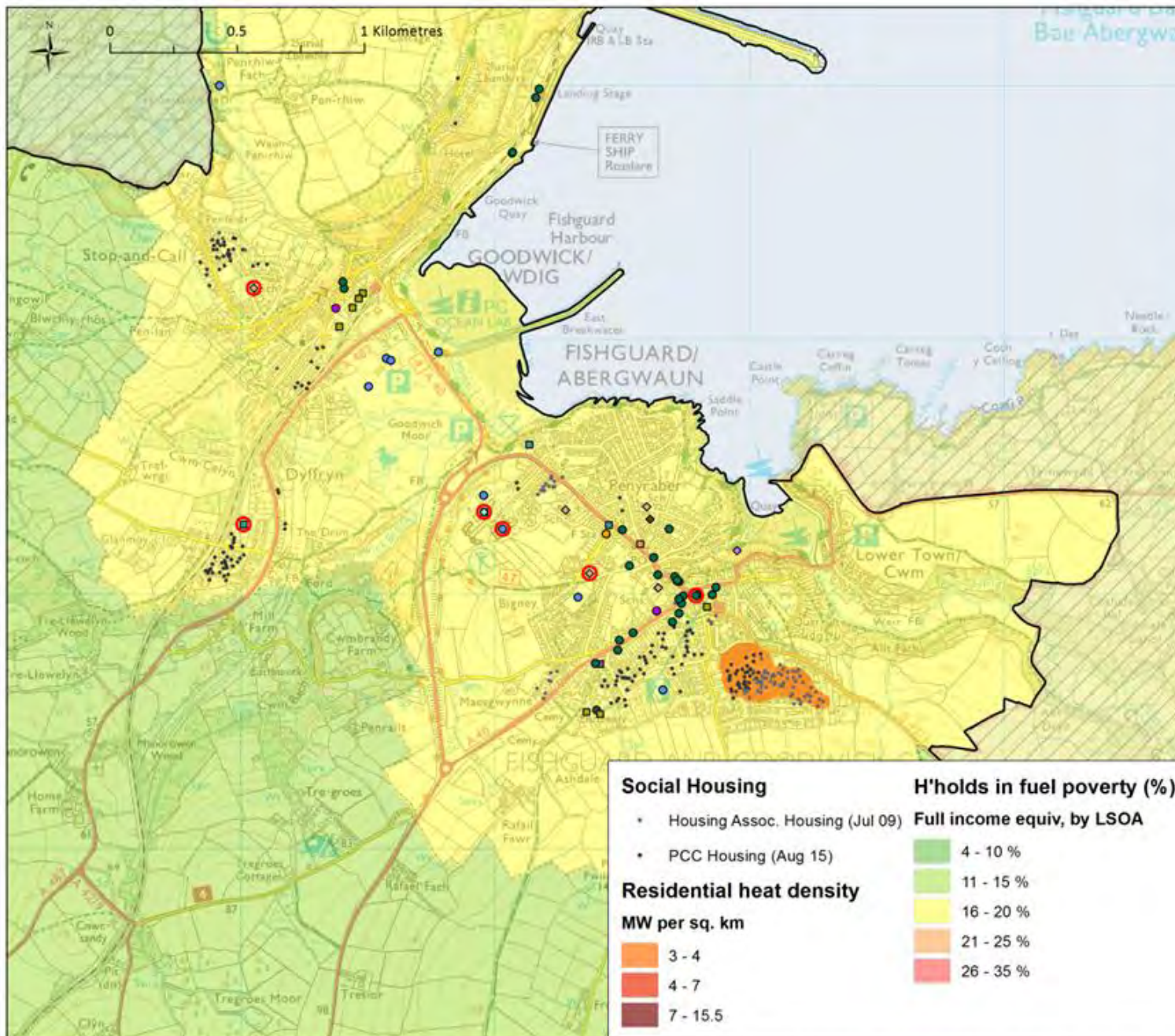
Key

-  Pembrokeshire only
-  Pembrokeshire Coast Nat. Park
-  Local Authority Boundary
-  Existing Solar PV Farms
- Parcels > 1.2 Ha**
-  Grades 3-5 or Non-agricultural

Date: 06 - 04 - 2017

Version: 1





Heat Opportunities Mapping

Fishguard: demand and anchor heat load properties

Key

- Pembrokeshire only
- Pembrokeshire Coast Nat. Park
- Local Authority Boundary
- PCC bldg > 100,000 kWh
- Ambulance Station
- Arena / Stadium
- Cinema / Conferences / Theatre
- Care / Nursing Home
- College
- Factory/Manufacturing
- Fire Station
- Hospital / Hospice
- Indoor / Outdoor Leisure Centre
- Law Court
- Library
- Museum / Gallery
- Office / Work Studio
- ◆ Police / Transport Police / Station
- ◆ Power Station / Energy Production
- ◆ Prep. / Primary / Middle School
- ◆ Secondary / High School
- ◆ Water / Waste w. / Sewage Works
- ◆ Zoo / Theme Park

Social Housing

- Housing Assoc. Housing (Jul 09)
- PCC Housing (Aug 15)

Residential heat density

MW per sq. km

- 3 - 4
- 4 - 7
- 7 - 15.5

H'holds in fuel poverty (%)

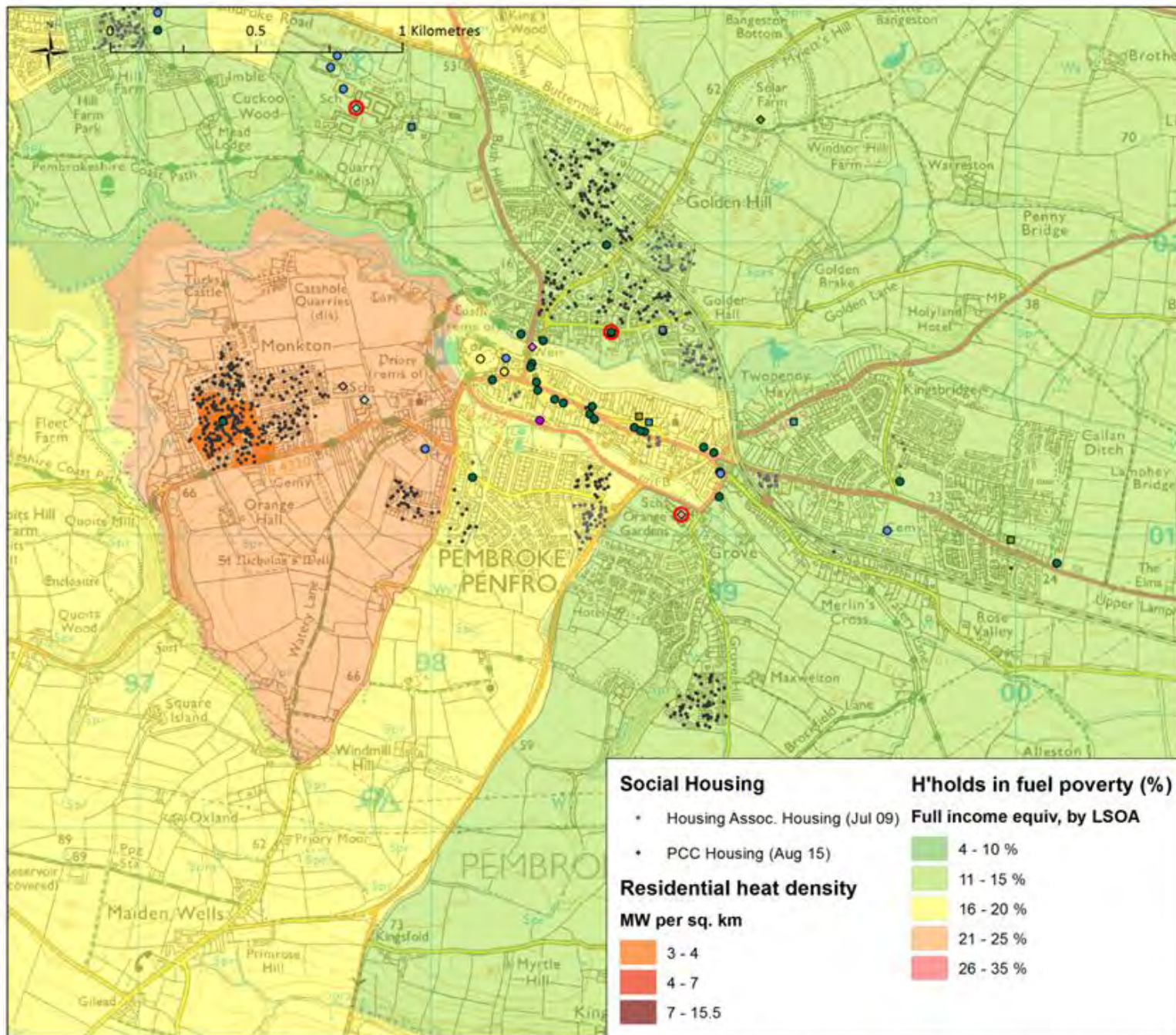
Full income equiv, by LSOA

- 4 - 10 %
- 11 - 15 %
- 16 - 20 %
- 21 - 25 %
- 26 - 35 %

Date: 29 - 03 - 2017

Version: 1





Heat Opportunities Mapping

Pembroke: demand and anchor heat load properties

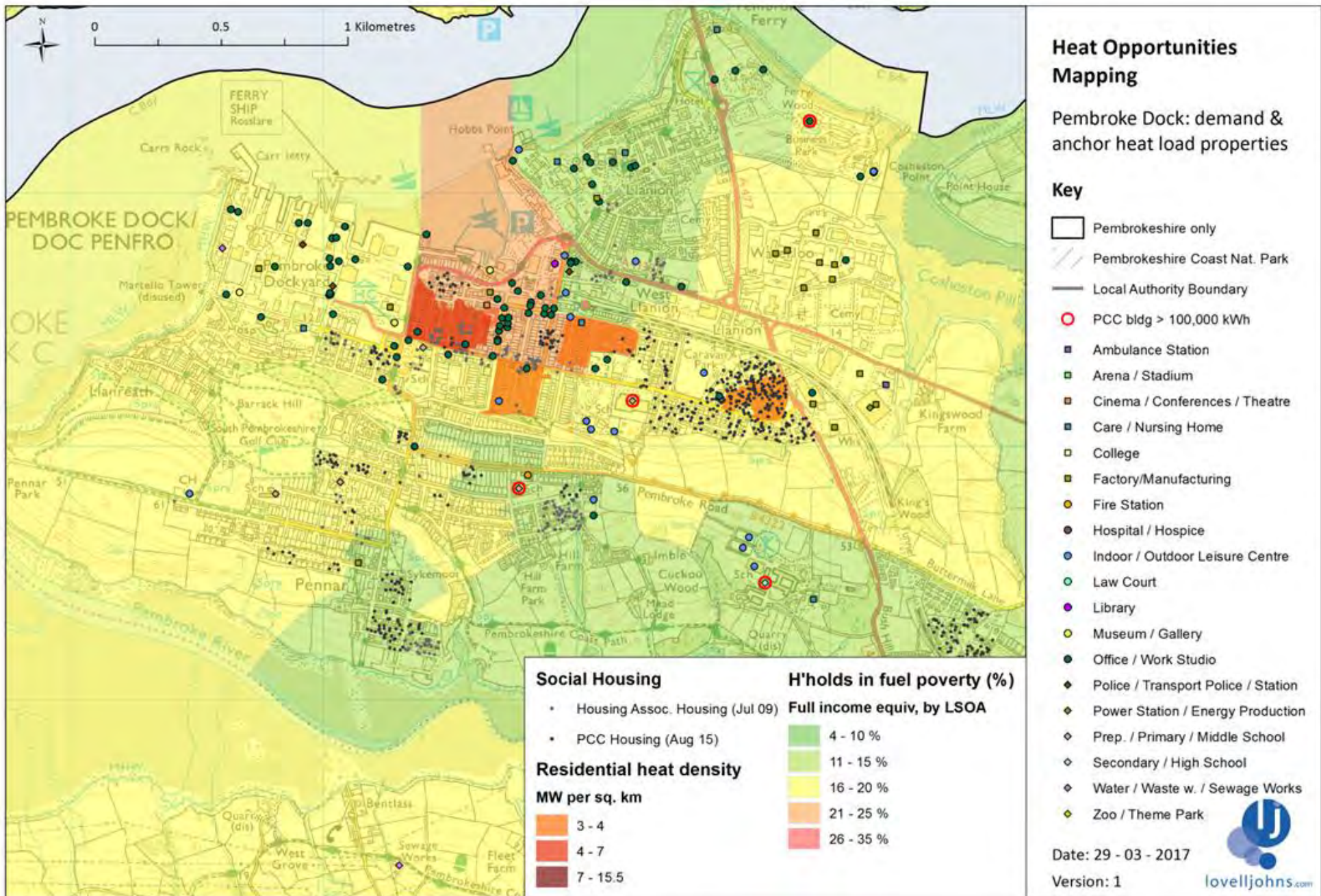
Key

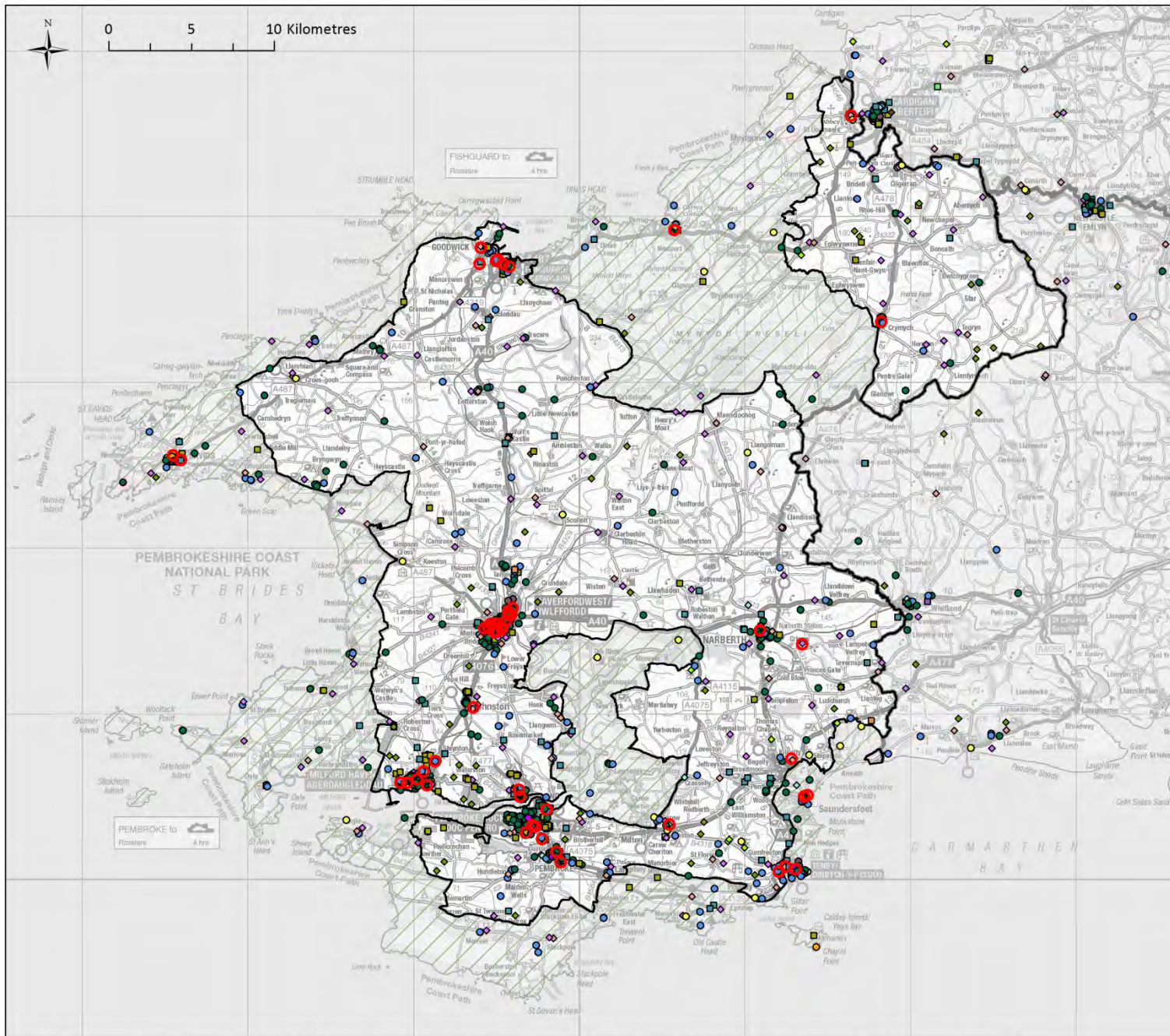
- Pembrokeshire only
- Pembrokeshire Coast Nat. Park
- Local Authority Boundary
- PCC bldg > 100,000 kWh
- Ambulance Station
- Arena / Stadium
- Cinema / Conferences / Theatre
- Care / Nursing Home
- College
- Factory/Manufacturing
- Fire Station
- Hospital / Hospice
- Indoor / Outdoor Leisure Centre
- Law Court
- Library
- Museum / Gallery
- Office / Work Studio
- Police / Transport Police / Station
- Power Station / Energy Production
- Prep. / Primary / Middle School
- Secondary / High School
- Water / Waste w. / Sewage Works
- Zoo / Theme Park

Date: 29 - 03 - 2017

Version: 1







Heat Opportunities Mapping

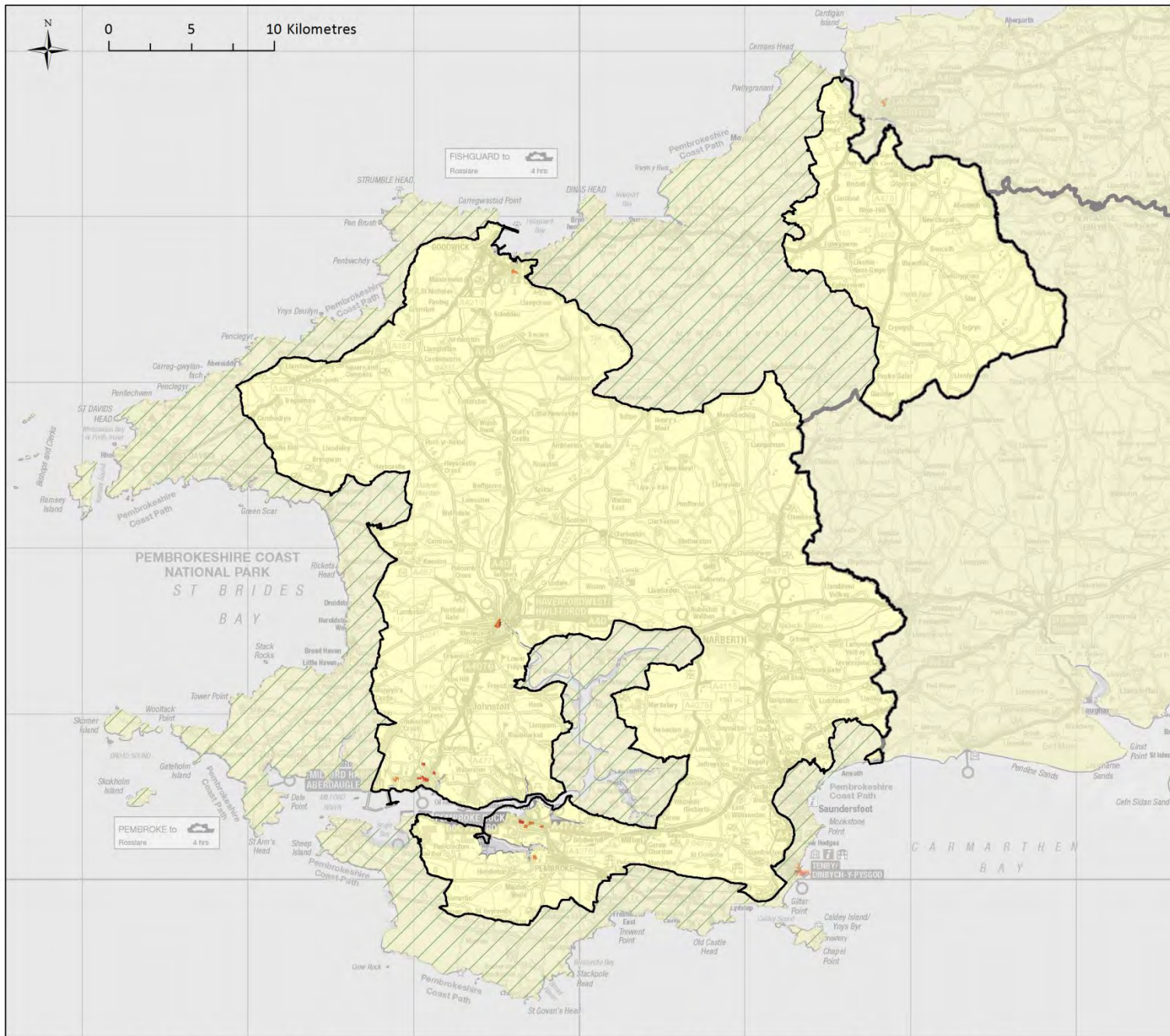
Potential anchor heat load properties

Key

- Pembrokeshire only
- Pembrokeshire Coast Nat. Park
- Local Authority Boundary
- PCC bldg > 100,000 kWh
- Ambulance Station
- Arena / Stadium
- Cinema / Conferences / Theatre
- Care / Nursing Home
- College
- Factory/Manufacturing
- Fire Station
- Hospital / Hospice
- Indoor / Outdoor Leisure Centre
- Law Court
- Library
- Museum / Gallery
- Office / Work Studio
- Police / Transport Police / Station
- Power Station / Energy Production
- Prep. / Primary / Middle School
- Secondary / High School
- Water / Waste w. / Sewage Works
- Zoo / Theme Park

Date: 23 - 03 - 2017
Version: 1





Heat Opportunities Mapping

Residential heat density by Output Area

Key

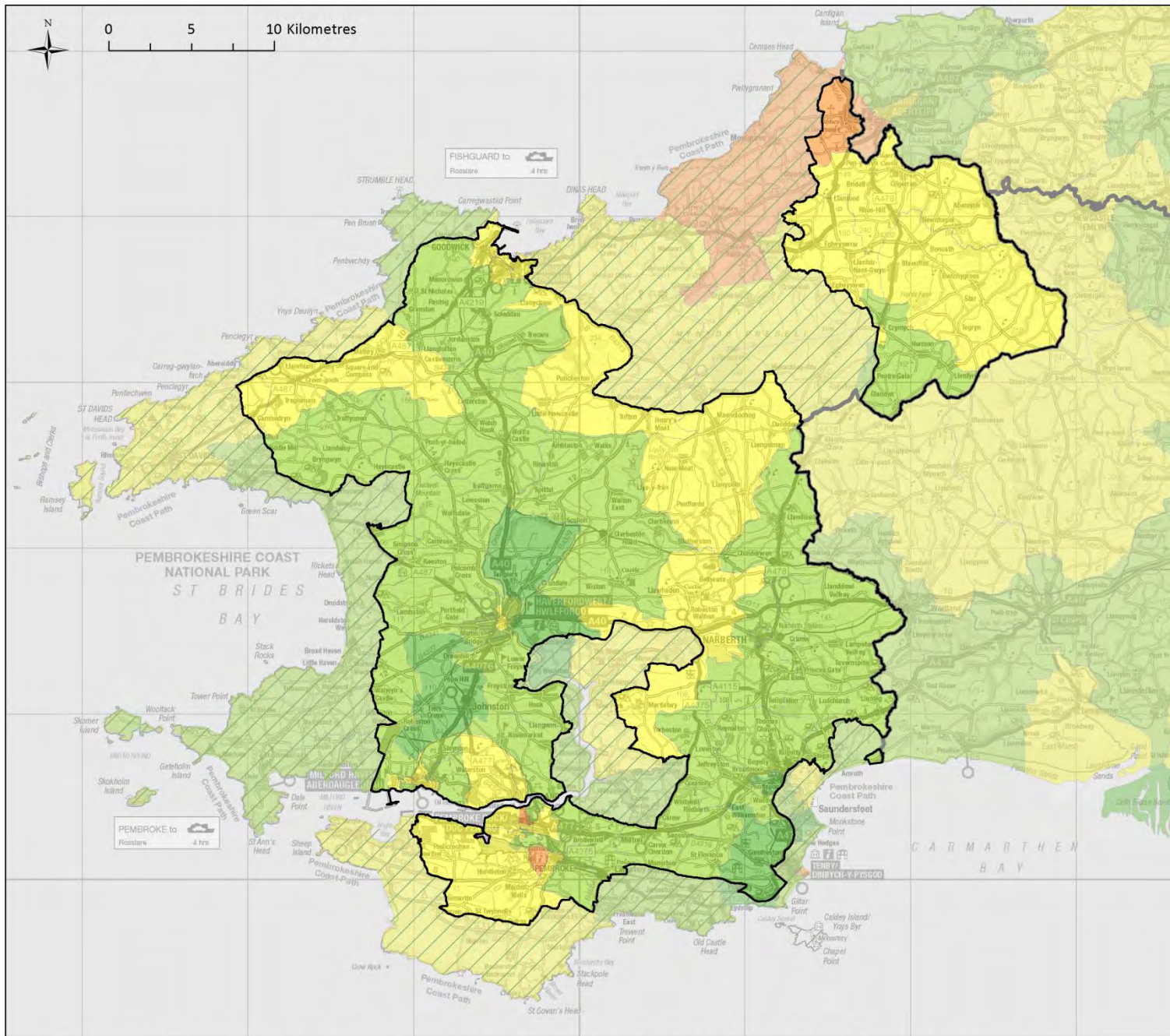
- Pembrokeshire only
- Pembrokeshire Coast Nat. Park
- Local Authority Boundary

Residential heat density MW per sq. km

- 0 - 3
- 3 - 4
- 4 - 7
- 7 - 15.5

Date: 23 - 03 - 2017
Version: 1





Heat Opportunities Mapping

Percent of households in fuel poverty (2004)

Key

- Pembrokeshire only
- Pembrokeshire Coast Nat. Park
- Local Authority Boundary

H'holds in fuel poverty (%)

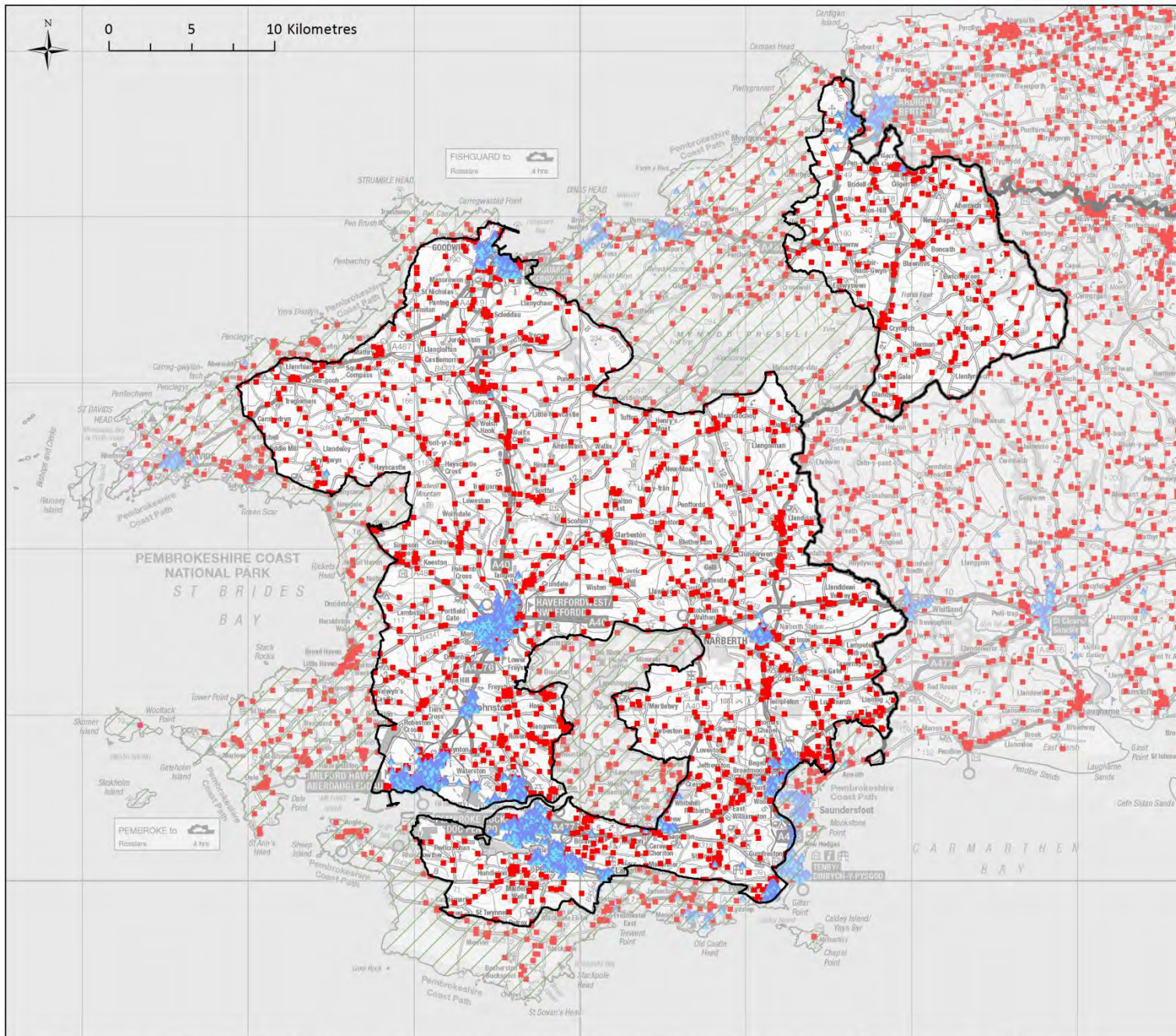
Full income equiv, by LSOA

- 4 - 10 %
- 11 - 15 %
- 16 - 20 %
- 21 - 25 %
- 26 - 35 %

Date: 23 - 03 - 2017

Version: 1





Heat Opportunities Mapping

Off-gas households

Key

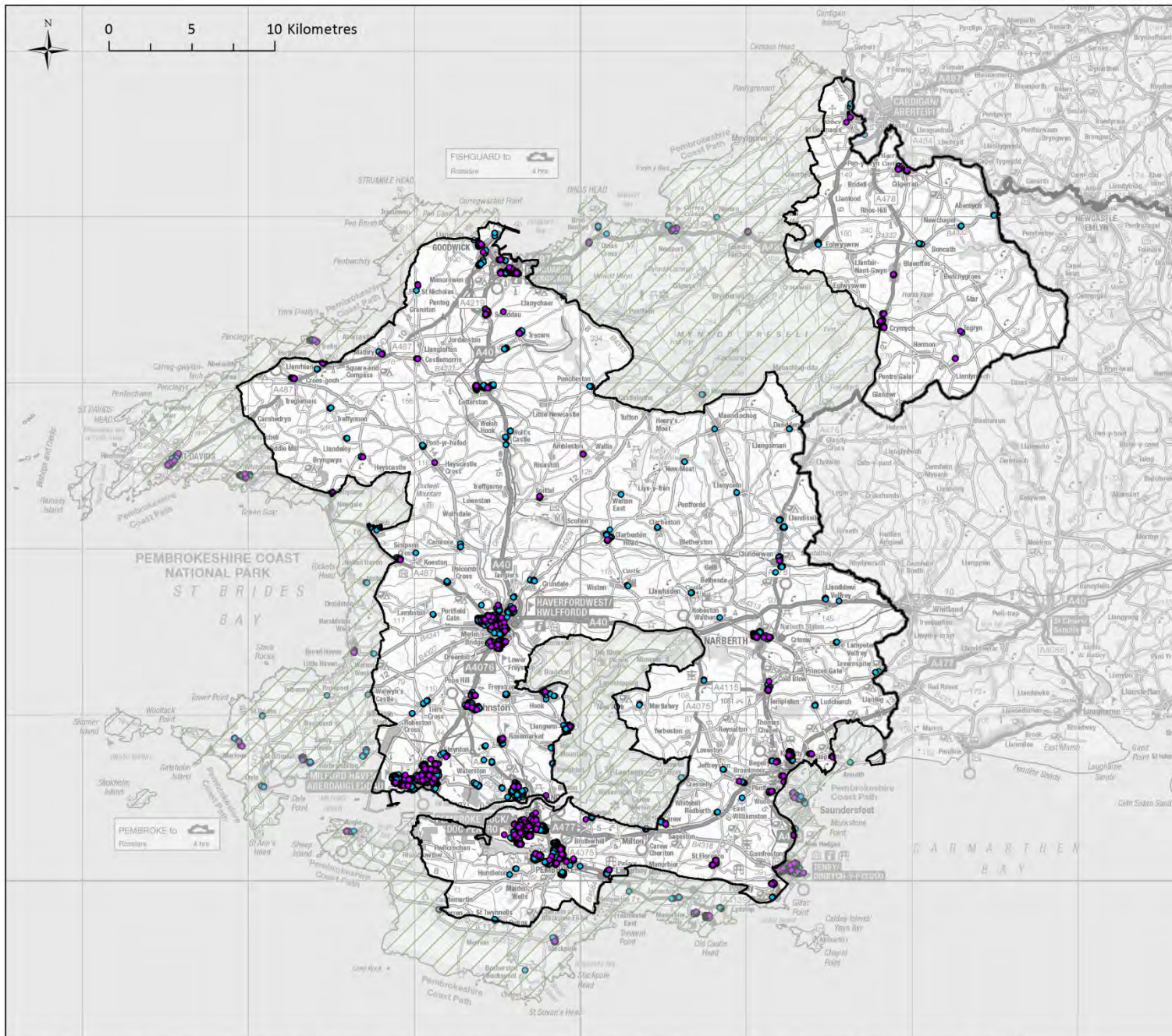
- Pembrokeshire only
- Pembrokeshire Coast Nat. Park
- Local Authority Boundary

Gas connection at postcode Recorded in 2013

- Off gas
- ▲ On gas

Date: 23 - 03 - 2017






Version: 1



Heat Opportunities Mapping

Social Housing - approximate locations

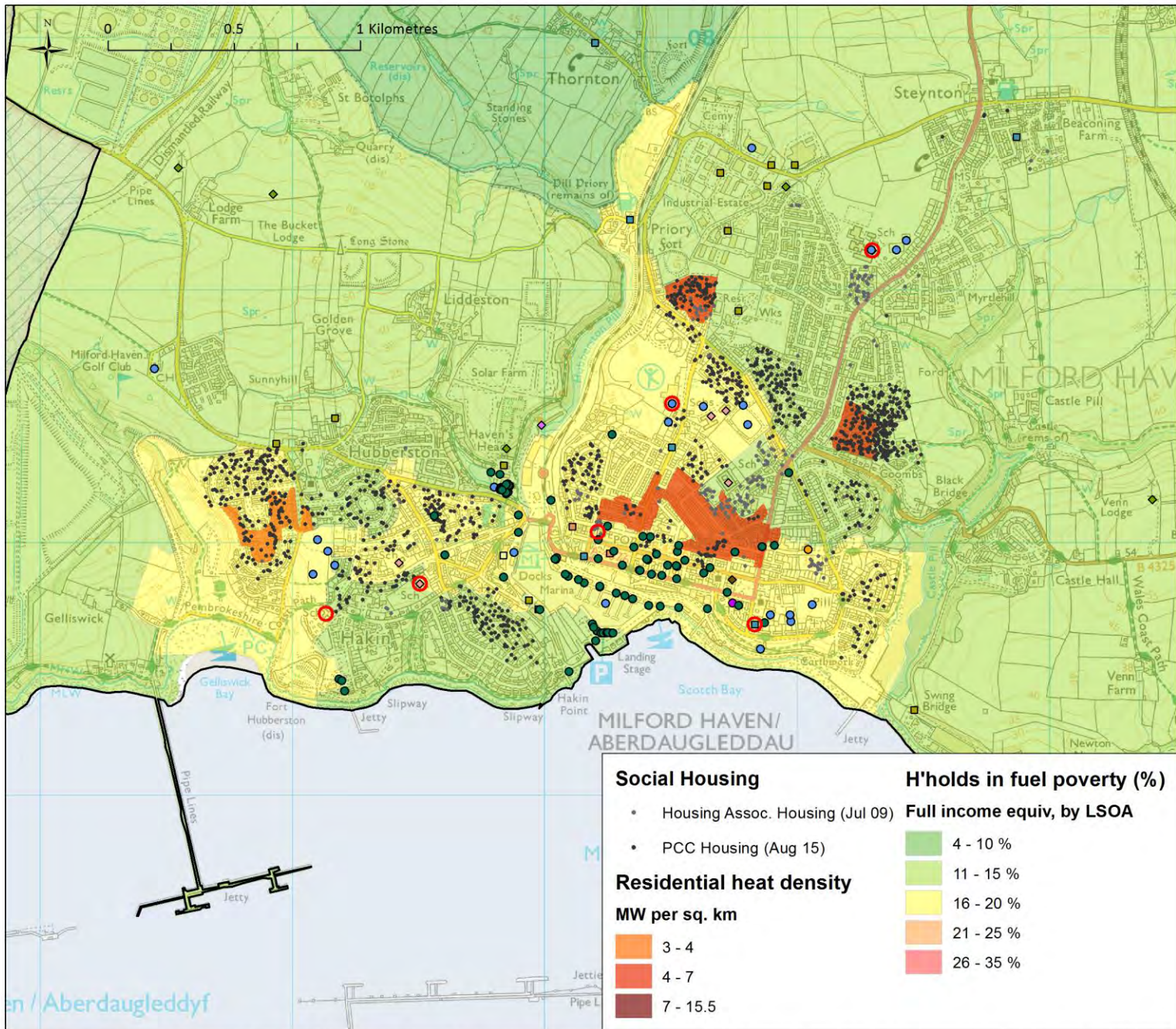
Key

-  Pembrokeshire only
-  Pembrokeshire Coast Nat. Park
-  Local Authority Boundary
-  Housing Assoc. Housing (Jul 09)
-  PCC Housing (Aug 15)

Date: 27 - 03 - 2017

Version: 1





Heat Opportunities Mapping

Milford Haven: demand and anchor heat load properties

Key

- Pembrokeshire only
- Pembrokeshire Coast Nat. Park
- Local Authority Boundary
- PCC bldg > 100,000 kWh
- Ambulance Station
- Arena / Stadium
- Cinema / Conferences / Theatre
- Care / Nursing Home
- College
- Factory/Manufacturing
- Fire Station
- Hospital / Hospice
- Indoor / Outdoor Leisure Centre
- Law Court
- Library
- Museum / Gallery
- Office / Work Studio
- Police / Transport Police / Station
- Power Station / Energy Production
- Prep. / Primary / Middle School
- Secondary / High School
- Water / Waste w. / Sewage Works
- Zoo / Theme Park

Social Housing

- Housing Assoc. Housing (Jul 09)
- PCC Housing (Aug 15)

Residential heat density

MW per sq. km

- 3 - 4
- 4 - 7
- 7 - 15.5

H'holds in fuel poverty (%)

Full income equiv, by LSOA

- 4 - 10 %
- 11 - 15 %
- 16 - 20 %
- 21 - 25 %
- 26 - 35 %

Date: 29 - 03 - 2017

Version: 1

