Office for Nuclear Regulation

| ASSESSMENT REPORT | | | |
|---|---|---|---|
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| **Project:** | Examination of NNB Generation Company (SZC) Limited's application for a Development Consent Order to build and operate the Sizewell C New Nuclear Power Station | | |
| **Site:** | Sizewell C New Nuclear Power Station | | |
| **Title:** | Demographic and emergency planning assessments in support of the Planning Inspectorate's examination of NNB Generation Company Limited's application for a Development Consent Order to build and operate the Sizewell C New Nuclear Power Station | | |
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# Technical Division

# Demographic and emergency planning assessments in support of the Planning Inspectorate's examination of NNB Generation Company Limited's application for a Development Consent Order to build and operate the Sizewell C New Nuclear Power Station

Assessment Report ONR-NR-AR-20-004
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## EXECUTIVE SUMMARY

This report presents the findings of the demographic and emergency planning assessments in support of the Planning Inspectorate's examination of NNB Generation Company (SZC) Limited's application for a Development Consent Order (DCO) to build and operate the Sizewell C New Nuclear Power Station (NNPS). This report, together with reports from other areas within ONR will be used to inform ONR's Written Representation to the Planning Inspectorate.

ONR's approach to demographic assessment was introduced in the Department for Business, Energy and Industrial Strategy (BEIS) 'Government Response: Consultation on the Siting Criteria and Process for a New National Policy Statement for Nuclear Power with Single Reactor Capacity over 1Gigawatt beyond 2025' July 2018.

ONR's approach to emergency planning assessment of planning applications for proposed developments is detailed on the Land Use Planning page of the ONR website and in ONR Guide NS-LUP-GD-003 revision 2 'Job Guide for the Processing of Planning Applications'.

Demographic Assessment

Government policy is to use the "semi-urban" demographics criterion as the limiting values for the siting of modern nuclear reactors. The basis of the "semi-urban" criterion, as well as the method by which this comparison is carried out in practice, is set out in ONR Guide NS-LUP-GD-001 'Land Use Planning and the Siting of Nuclear Installations' and ONR Instruction NS-LUP-IN-002 'Population Density Assessment Around Proposed Nuclear Power Station Sites'.

NS-LUP-GD-001 states that '*a site shall be determined to be potentially suitable for the deployment of new nuclear power stations if all the ratios of the actual versus the hypothetical cumulative weighted population values SPFs ("Site Population Factors") are less than unity',* i.e. the "semi-urban" demographics criterion is met.

For the proposed Sizewell C NNPS DCO application, demographic assessment comprised assessing SPFs out to 30km from the centre points of the two proposed Sizewell C reactor buildings.

The DCO application includes provision of a site accommodation campus and caravan park to provide temporary accommodation for workers involved in construction of the power station. This increased population plus a further predicted increase in population due to construction workers living in existing accommodation near to the station site has been included in above the assessments.

The demographic assessment also comprised assessing SPFs out to 30km from the centre point of the existing Sizewell B Nuclear Power Station reactor building, to ensure it continued to meet the "semi-urban" demographics criterion despite increases in the population associated with the construction of Sizewell C NNPS.

Assessment results demonstrate that the maximum SPFs for both the Sizewell C and Sizewell B reactor building centre points are well below 1 and therefore meet the "semi-urban" demographics criterion.

Emergency Planning Assessment

Upon receipt of the request for examination of the Sizewell C NNPS the ONR Guide NS-LUP-GD-003 Revision 2 'Job Guide for the Processing of Planning Applications' requires ONR to consult the relevant Local Authority Emergency Planner and the planning departments of the proposed NNPS and the planning departments of any existing nuclear sites within whose consultation zones the NNPS lies.

There are two existing relevant nuclear licensed sites: Sizewell A and Sizewell B. The Sizewell A site, for which Magnox Limited is the nuclear site licence holder, no longer requires a Radiation (Emergency Preparedness and Public Information) Regulations 2019 (REPPIR19) off-site emergency plan. Therefore, consultation was undertaken with Suffolk County Council Emergency Planner, responsible for the Sizewell B REPPIR19 off-site emergency plan as well as the planning departments of Magnox Ltd for the Sizewell A site, EDF Energy for the Sizewell B Nuclear Power Station and NNB Generation Company (SZC) Limited for the proposed Sizewell C NNPS.

As required by NS-LUP-GD-003 assurance was obtained that adequate emergency planning arrangements can be maintained or developed during the construction, active commissioning and operational phases of the Sizewell C NNPS.

Also as required by NS-LUP-GD-003 work is continuing to ensure the Sizewell C NNPS does not represent a significant external hazard with regard to safety on both the Sizewell A and B nuclear sites, and vice versa.

Principle Recommendation

ONR should not object to the Planning Inspectorate granting a DCO for the Sizewell C NNPS based on demographics or emergency planning considerations.

## LIST OF ABBREVIATIONS

| | |
|---|---|
| DCO | Development Consent Order |
| BEIS | Department for Business, Energy and Industrial Strategy |
| HSE | Health and Safety Executive |
| LUP | Land Use Planning |
| ONR | Office for Nuclear Regulation |
| NPS | Nuclear Power Station |
| NNPS | New Nuclear Power Station |
| REPPIR19 | Radiation (Emergency Preparedness and Public Information) Regulations 2019. |
| SAP | Safety Assessment Principle(s) |
| SPF | Site Population Factors |

## TABLE OF CONTENTS

# 1 INTRODUCTION

1. This report presents the findings of ONR's demographic and emergency planning assessments in support of the Planning Inspectorate's examination of NNB Generation Company (SZC) Limited's application for a Development Consent Order (DCO) to build and operate the Sizewell C New Nuclear Power Station (NNPS).

2. ONR's approach to demographic assessment was introduced in the Department for Business, Energy and Industrial Strategy (BEIS) 'Government Response: Consultation on the Siting Criteria and Process for a New National Policy Statement for Nuclear Power with Single Reactor Capacity over 1Gigawatt beyond 2025' July 2018 (Ref. 1).

3. ONR's approach to emergency planning assessment of planning applications for proposed developments is detailed on the Land Use Planning page of the ONR website (Ref. 2).

# 2 ASSESSMENT STRATEGY

4. The assessment strategy for the examination of NNB Generation Company (SZC) Limited's application for a DCO to build and operate the Sizewell C NNPS is set out in this section.

## 2.1 Standards and Criteria

5. The relevant standards and criteria adopted within the assessments are:

- ONR Guide NS-LUP-GD-001 'Land Use Planning and the Siting of Nuclear Installations' (Ref. 3);
- ONR Instruction NS-LUP-IN-002 'Population Density Assessment Around Proposed Nuclear Power Station Sites' (Ref. 4);
- ONR Guide NS-LUP-GD-003 Revision 2 Job Guide for the Processing of Planning Applications (Ref. 5); and
- Safety Assessment Principles (SAP) (Ref. 6).

6. The assessments were undertaken using normal 'night time residential population' data taken from the National Population Database – Residential Layer (March 2018 update)[4].

7. The above ONR Guides and instruction are considered to be accepted relevant good practice and use of the National Population Database – Residential Layer (March 2018 update) provides the most accurate and up-to-date population data to ensure a realistic demographic assessment is undertaken.

[4] The population data used in this assessment is the normal 'night time residential population' taken from the National Population Database – Residential Layer (March 2018 update). The dataset is constructed using the OS AddressBase Premium (Epoch 55, January 2018) to identify and locate all potentially occupied buildings. Each residential building (other than communal establishments) is then assigned the average household population derived from the 2011 census data for the Output Area within which they are situated. In England and Wales, each "Output Area" comprises approximately 125 households. The total population within each 100m OS grid square is then summed and assigned to the centroid of that grid square.

The data overestimates the population of GB by approximately 3%, as it is assumed that all residential buildings (including those under construction) are occupied, but the average household population values are derived from the total population of the OA divided by the number of occupied homes.

For the Sizewell C demographic assessment, there is a significant margin between the assessed SPFs and the SPFMAX of 1. Therefore the exclusion of communal establishments from the population dataset will not affect the outcome of the assessment.

## 2.2 Safety Assessment Principles

8. The key SAPs applied within the assessment are included within Table 1 of this report.

# 3 ONR ASSESSMENT

## 3.1 Demographic Assessment

9. NS-LUP-GD-001 states that 'a site shall be determined to be potentially suitable for the deployment of NNPS if all the ratios of the actual versus the hypothetical cumulative weighted population values ("Site Population Factors [SPF]") are less than unity, i.e. SPFMAX < 1'.

10. NS-LUP-IN-002 states that 'In order to undertake population density assessments the assessor requires either:

- a centre point of the NNPS (six figure Easting and Northing); or
- location and size of the proposed site in order to make an informed decision on the number of centre points required to be assessed to inform the site selection decision. As a minimum, centre points to cover all 100 m grid squares on the site should be assessed. This will ensure that the site as a whole meets the demographic criteria or that any parts of the site that do not meet the criteria are highlighted as unsuitable for a Nuclear Power Plant.'

11. The centre points of the two Sizewell C reactor buildings have been provided by NNB Generation Company (SZC) Limited (Ref. 7). The centre point of the Sizewell B reactor building is provided in 'Land Use Planning Outer Consultation Zone Site Centre Points Spreadsheet' (Ref.8).

12. The DCO application includes provision of a site accommodation campus (2400 person occupancy) and caravan park (600 person occupancy) to provide temporary accommodation for workers involved in construction of the station. Additionally, as the peak Sizewell C workforce will be around 8000, I have conservatively assumed that 5000 workers will all reside within the first 10 km from site, distributed proportionally around existing population centres. This represents a 21.5% increase in the population of the area.

13. For the proposed Sizewell C NNPS DCO application, demographic assessment comprised assessing SPFs out to 30 km from the centre points of the two Sizewell C reactor buildings (Ref. 10)).

14. The increased population associated with the site accommodation campus and the caravan park, plus a further predicted increase in population due to construction workers living in existing accommodation near to the station site, has been included in above demographic assessment for Sizewell C NNPS.

15. The demographic assessment also comprised assessing SPFs out to 30 km from the centre point of the Sizewell B reactor building (Ref. 11) to ensure it will continue to meet the "semi-urban" demographics criterion despite increases in the population associated with the construction of the Sizewell C NNPS.

16. Ref. 12 provides additional detailed information used as part of the assessments.

17. Assessment results are given in Annex 1. The maximum assessed SPFs are:

- 0.28 (for Sizewell C NNPS North reactor building);
- 0.30 (for Sizewell C NNPS South reactor building); and
- 0.35 (for Sizewell B Nuclear Power Station (NPS) reactor building).

All of these assessed SPFs are well below the SPFMAX of 1.

18. As the assessment has been conducted in accordance with ONR Guides NS-LUP-GD-001 (Ref. 3) and NS-LUP-GD-003 (Ref. 5) and ONR Instruction NS-LUP-IN-002 (ref. 4), the requirement of SAP ST.1 that development control planning advice provided by ONR should align with siting criteria set by Government policy is met.

19. The Government previously undertook work towards designation of a new National Policy Statement for nuclear, which was to identify sites that are potentially suitable for deployment of a NNPS by 2035. It should be noted that, in addition to undertaking assessment of population distribution in support of the Sizewell C DCO application, ONR has previously (2018) provided siting advice to the government based on an assessment of population distribution out to 30 km around each hectare (100 m x 100 m national grid square) of the proposed Sizewell C site (Ref. 13). The assessment (which included predicted population growth based on estimated and projected total population data for Suffolk to 2035, but did not include more recently available data such as the site accommodation campus, caravan park or other increases in population due to SZC construction) found that the entire site meets the semi-urban demographics criterion and is therefore potentially suitable for the deployment of new NNPSs up to 2035.

20. I conclude that ONR should not object to the Planning Inspectorate granting a DCO for the Sizewell C NNPS based on demographics considerations.

### 3.2 Emergency Planning Assessment

21. As part of the ONR examination of the Sizewell C NNPS DCO application ONR Guide NS-LUP-GD-003 revision 2 ‘Job Guide for the Processing of Planning Applications’ requires ONR to consult:

- The emergency planning function within the local authority, whose area includes the Sizewell C site to obtain adequate assurance that the construction, operation and decommissioning of the Sizewell C NNPS can be accommodated within their existing off-site emergency planning arrangements (or an amended version); and
- The existing licensees planning functions to obtain their assurance that the development either does not represent an external hazard to their nuclear licensed site or that they are able to demonstrate that the development does not constitute a significant hazard with regard to safety on their site.

22. In response to NNB Generation Company (SZC) Limited’s application for a DCO to build and operate the Sizewell C NNPS ONR consulted with the Suffolk County Council Emergency Planner and both the Sizewell A Magnox site and the Sizewell B EDF Energy NPS planning functions (via the ONR site inspectors and relevant ONR External Hazards inspectors).

23. As, in this instance, the Sizewell A Magnox site and the Sizewell B EDF Energy NPS also represent an external hazard to the proposed development (the Sizewell C NNPS), ONR also consulted with the ONR Sizewell C site inspector and relevant ONR External Hazards inspector.

24. The Emergency Planner for Suffolk County Council has confirmed that the County Council has not identified any barriers that would prevent the Sizewell C development being incorporated into the existing Sizewell B Radiation (Emergency, Preparedness and Public Information) Regulations 2019 (REPPIR19) off-site emergency arrangements (Ref. 14). However, the County Council are seeking two conditions be included in the DCO to ensure that the ability to respond to a Sizewell B radiation emergency remains viable:

    1. No part of the works covered by the DCO shall commence until emergency plans relating to the construction have been agreed and issued. Nuclear emergency plans cover the EDF Energy Sizewell B Operators emergency plan and the Suffolk County Council Off-Site Emergency Plan issued under REPPIR19. Wider civil contingency arrangements include Suffolk Resilience Forum emergency plans for identified risks issued under the Civil Contingencies Act 2004 that might affect the Sizewell C main development site and any associated infrastructure; and

    2. The emergency plans shall be carried out as approved in relation to the relevant part of the relevant works, unless otherwise agreed after consultation through the Sizewell Emergency Planning Consultative Committee or Suffolk Resilience Forum as appropriate.

25. Although ONR is not involved with ensuring Civil Contingencies Act 2004 compliance, it is the regulator for REPPIR19 on nuclear sites. I therefore consider it appropriate for ONR to agree in principle to the inclusion of the two DCO conditions above (not withstanding legal improvements to the wording), subject to the following amendment to limitation in condition 1:

    “No part of the construction works covered by the DCO shall commence until emergency plans relating ***to that part of the works*** have been agreed and issued”

    This amendment reflects that the Sizewell C construction project will proceed in stages. As initially written condition 1 may be interpreted as meaning plans for later stages of the project need to be in place before earlier stages begin.

26. NNB Generation Company (SZC) Limited have demonstrated to the satisfaction of the ONR Sizewell C Site Inspector that they have considered the potential external hazards arising from the Sizewell A Magnox site and the Sizewell B EDF Energy NPS to ensure that the decommissioning operations on the Sizewell A site and operation of the Sizewell B NPS do not constitute a significant external hazard with regard to safety on the Sizewell C site (Ref. 15).

27. Sizewell A Magnox site and the Sizewell B EDF Energy NPS have demonstrated to the satisfaction of the Sizewell A Magnox site and the Sizewell B EDF Energy NPS site inspectors that they will work with or are continuing to work with NNB Generation Company (SZC) Limited to ensure construction, active commissioning and subsequent operation of the Sizewell C NNPS does not constitute a significant external hazard with regard to safety on the Sizewell A Magnox site and the Sizewell B EDF Energy NPS (Ref. 16 and Ref. 17).

28. I conclude that ONR should not object to the Planning Inspectorate granting a DCO for Sizewell C NNPS based on emergency planning considerations.

# 4 CONCLUSIONS AND RECOMMENDATIONS

## 4.1 Conclusions

29. This report presents the findings of the demographic and emergency planning assessments in support of the examination of NNB Generation Company (SZC) Limited's application to the Planning Inspectorate for a DCO to build and operate the Sizewell C NNPS.

30. I conclude that:

- In accordance with NS-LUP-GD-001, my assessment shows that the two reactor locations are potentially suitable for the deployment of NNPS whereby all the ratios of the actual versus the hypothetical cumulative weighted population values ("Site Population Factors [SPF]") are significantly less than unity, i.e. SPFMAX < 1'.

- Accordingly, siting two reactor buildings at the centre points provided by NNB Generation Company (SZC) Limited as part of their application for a DCO meets the Government's demographic siting criteria as specified in BEIS 'Government Response: Consultation on the Siting Criteria and Process for a New National Policy Statement for Nuclear Power with Single Reactor Capacity over 1Gigawatt beyond 2025' July 2018 (Reference 1);

- Adequate assurance has been provided that adequate emergency planning arrangements can be maintained or developed during the construction, active commissioning and subsequent operational phases of the Sizewell C NNPS;

- Adequate assurance has been provided that work is continuing to ensure the Sizewell C NNPS does not represent a significant hazard with regard to safety on the Sizewell A Magnox site and EDF Energy Sizewell B NPS (and vice versa); and

- ONR should not object to the Planning Inspectorate granting a Development Consent Order for the Sizewell C NNPS based on demographic or emergency planning considerations.

## 4.2 Recommendations

**31.** I recommend that:

**1.** ONR should not object to the Planning Inspectorate granting a DCO for the Sizewell C NNPS based on demographics or emergency planning considerations.

2. As the regulator for REPPIR19 on nuclear sites, ONR should agree in principle to the inclusion of the two DCO conditions requested by Suffolk County Council (not withstanding legal improvements to the wording), subject to the following amendment to the limitation in condition 1:

    1. No part of the works covered by the DCO shall commence until emergency plans relating to ~~the construction~~ ***that part of the works*** have been agreed and issued. Nuclear emergency plans cover the EDF Energy Sizewell B Operators emergency plan and the Suffolk County Council Off Site Emergency Plan issued under Radiation (Emergency Preparedness and Public Information) Regulations 2019. Wider civil contingency arrangements include Suffolk Resilience Forum emergency plans for identified risks issued under the Civil Contingencies Act 2004

that might affect the Sizewell C main development site and any associated infrastructure; and

2. The emergency plans shall be carried out as approved in relation to the relevant part of the relevant works, unless otherwise agreed after consultation through the Sizewell Emergency Planning Consultative Committee or Suffolk Resilience Forum as appropriate.

This amendment reflects that the Sizewell C construction project will proceed in stages. As initially written condition 1 may be interpreted as meaning plans for later stages of the project need to be in place before earlier stages begin.

## 5 REFERENCES

1. Department for Business, Energy and Industrial Strategy 'Government Response: Consultation on the Siting Criteria and Process for a New National Policy Statement for Nuclear Power with Single Reactor Capacity over 1Gigawatt beyond 2025'

2. ONR Land Use Planning web pages.

3. NS-LUP-GD-001 Revision 0 'Land Use Planning and the Siting of Nuclear Installations' (2018/215763).

4. NS-LUP-IN-002 Revision 0 'Population Density Assessment Around Proposed Nuclear Power Station Sites' (2018/0212166).

5. ONR Guide NS-LUP-GD-003 Revision 2 'Job Guide for the Processing of Planning Applications' (2018/227602).

6. ONR Safety Assessment Principles for Nuclear Facilities, 2014 Edition, Revision 0

7. Email from [redacted] to [redacted] entitled 'Reactor Centre Points for Sizewell C DCO Population Density Assessments, 27 June 2020 (2020/199673)

8. Land Use Planning Outer Consultation Zone Site Centre Points Spreadsheet (2019/309905).

9. Sizewell C population density assessment – North Reactor Building (2020/314983).

10. Sizewell C population density assessment – South Reactor Building (2020/314982).

11. Sizewell B Population density assessment (2020/314981).

12. Sizewell C DCO Assessment Note in support of ONR-TD-AR-20-004 'Demographic and emergency planning assessments in support of the Planning Inspectorate's examination of NNB Generation Company Limited's application for a Development Consent Order to build and operate the Sizewell C New Nuclear Power Station' (2020/317605).

13. Draft Advice - SSA Demographic Assessment Form (C5) – Sizewell C September 2018 (2018/296331) and ONR-TD-AR-18-013 Revision 0 Land Use Planning Demographic Assessment in support of the 2018 Strategic Siting Assessment for New Nuclear Power Stations which may be deployed during the period 2026 and 2035 (2018/0407503).

14. Email: Response from Suffolk County Council re Development Consent Order (DCO) to Build and Operate Sizewell C - Emergency Planning (2020/319047).

15. Email: ONR's external hazards assessment of Sizewell C DCO Examination in support of ONR's Assessments Report - 25 November 2020 (2020/315872).

16. Email: Response from Site inspector to confirm that Sizewell A Magnox site will work with NNB Generation Company (SZC) Limited to ensure construction, active commissioning & operation of the Sizewell C NNPS does not constitute a significant external hazard with regard to safety on the Sizewell A Magnox site (2020/321878).

17. Email: Response from Site inspector to confirm that Sizewell B EDF Energy NPS has demonstrated that they are continuing to work with NNB Generation Company (SZC) Limited to ensure construction, active commissioning & operation of the Sizewell C NNPS does not constitute a significant external hazard with regard to safety on the Sizewell B EDF Energy NPS (2020/320266).

## Table 1

Relevant Safety Assessment Principles Considered During the Assessment

| SAP No | SAP Title | Description |
|---|---|---|
| ST.1 | **Siting** Development control planning advice | Development control planning advice provided by ONR should align with siting criteria set by Government policy. |

# Annex 1

## Assessed Site Population Factors (SPFs)[**]

Sizewell C NNPS (North Reactor Building)

Max SPF with rotation of 20° = 0.28 in sector I at 0-4 km (Note that sector I now lies between 220°and 250°).

| Radial Band (km) | A | B | C | D | E | F | G | H | I | J | K | L | All |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 - 1 | | | | | | | | | | | | | |
| 0 - 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.04 | 0.01 | 0.15 | 0.00 | 0.00 | 0.09 |
| 0 - 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.04 | 0.14 | 0.21 | 0.01 | 0.01 | 0.18 |
| 0 - 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.03 | 0.28 | 0.16 | 0.01 | 0.01 | 0.21 |
| 0 - 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.03 | 0.24 | 0.13 | 0.01 | 0.01 | 0.18 |
| 0 - 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.03 | 0.21 | 0.11 | 0.01 | 0.01 | 0.16 |
| 0 - 7 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.03 | 0.18 | 0.10 | 0.01 | 0.01 | 0.15 |
| 0 - 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.03 | 0.17 | 0.09 | 0.01 | 0.01 | 0.14 |
| 0 - 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.03 | 0.15 | 0.09 | 0.01 | 0.01 | 0.13 |
| 0 - 10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.03 | 0.14 | 0.10 | 0.01 | 0.01 | 0.13 |
| 0 - 11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.03 | 0.13 | 0.09 | 0.01 | 0.01 | 0.12 |
| 0 - 12 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.03 | 0.13 | 0.09 | 0.01 | 0.01 | 0.12 |
| 0 - 13 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.02 | 0.12 | 0.08 | 0.01 | 0.01 | 0.11 |
| 0 - 14 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.02 | 0.11 | 0.08 | 0.01 | 0.01 | 0.11 |
| 0 - 15 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.02 | 0.11 | 0.08 | 0.01 | 0.01 | 0.11 |
| 0 - 16 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.02 | 0.10 | 0.07 | 0.01 | 0.02 | 0.11 |
| 0 - 17 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.02 | 0.10 | 0.07 | 0.01 | 0.02 | 0.10 |
| 0 - 18 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.02 | 0.10 | 0.07 | 0.01 | 0.02 | 0.10 |
| 0 - 19 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.02 | 0.10 | 0.07 | 0.01 | 0.02 | 0.10 |
| 0 - 20 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.02 | 0.09 | 0.07 | 0.01 | 0.02 | 0.10 |
| 0 - 21 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.02 | 0.09 | 0.07 | 0.01 | 0.02 | 0.09 |
| 0 - 22 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.02 | 0.09 | 0.06 | 0.01 | 0.01 | 0.09 |
| 0 - 23 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.02 | 0.09 | 0.06 | 0.01 | 0.01 | 0.09 |
| 0 - 24 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.02 | 0.09 | 0.06 | 0.01 | 0.01 | 0.09 |
| 0 - 25 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.02 | 0.09 | 0.06 | 0.01 | 0.01 | 0.09 |
| 0 - 26 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.02 | 0.09 | 0.06 | 0.01 | 0.01 | 0.09 |
| 0 - 27 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.02 | 0.09 | 0.06 | 0.01 | 0.01 | 0.09 |
| 0 - 28 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.02 | 0.08 | 0.06 | 0.01 | 0.01 | 0.09 |
| 0 - 29 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.02 | 0.08 | 0.06 | 0.01 | 0.02 | 0.09 |
| 0 - 30 | 0.01 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.02 | 0.08 | 0.05 | 0.01 | 0.02 | 0.09 |

[**] The methodology applies rotations by adding multiples of 5° to the HSL supplied population data points. With a rotation of 15° applied to the data points, those lying between 345° and 15° will lie in sector A, i.e. a positive rotation of the population data points equates to a negative rotation of the sector.

Sizewell C NNPS (South Reactor Building)

Max SPF with rotation of 15° = 0.30 in sector I at 0-4 km (Note sector I now lies between 225°and 255).

| Radial Band (km) | A | B | C | D | E | F | G | H | I | J | K | L | All |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 - 1 | | | | | | | | | | | | | |
| 0 - 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.02 |
| 0 - 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.22 | 0.01 | 0.01 | 0.01 | 0.10 |
| 0 - 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.30 | 0.01 | 0.01 | 0.00 | 0.14 |
| 0 - 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.25 | 0.01 | 0.01 | 0.00 | 0.13 |
| 0 - 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.22 | 0.01 | 0.01 | 0.01 | 0.11 |
| 0 - 7 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.02 | 0.19 | 0.01 | 0.01 | 0.01 | 0.11 |
| 0 - 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.02 | 0.17 | 0.01 | 0.01 | 0.01 | 0.10 |
| 0 - 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.01 | 0.16 | 0.02 | 0.01 | 0.01 | 0.10 |
| 0 - 10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.01 | 0.15 | 0.03 | 0.01 | 0.01 | 0.10 |
| 0 - 11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.01 | 0.14 | 0.03 | 0.01 | 0.01 | 0.10 |
| 0 - 12 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.13 | 0.03 | 0.01 | 0.01 | 0.09 |
| 0 - 13 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.13 | 0.03 | 0.01 | 0.01 | 0.09 |
| 0 - 14 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.12 | 0.02 | 0.01 | 0.01 | 0.09 |
| 0 - 15 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.12 | 0.02 | 0.01 | 0.01 | 0.08 |
| 0 - 16 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.11 | 0.02 | 0.01 | 0.01 | 0.08 |
| 0 - 17 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.11 | 0.02 | 0.01 | 0.01 | 0.08 |
| 0 - 18 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.11 | 0.02 | 0.01 | 0.01 | 0.08 |
| 0 - 19 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.10 | 0.02 | 0.01 | 0.01 | 0.08 |
| 0 - 20 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.10 | 0.02 | 0.01 | 0.01 | 0.08 |
| 0 - 21 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.10 | 0.02 | 0.01 | 0.01 | 0.08 |
| 0 - 22 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.10 | 0.02 | 0.01 | 0.01 | 0.07 |
| 0 - 23 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.09 | 0.02 | 0.01 | 0.01 | 0.07 |
| 0 - 24 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.09 | 0.02 | 0.01 | 0.01 | 0.07 |
| 0 - 25 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.09 | 0.02 | 0.01 | 0.01 | 0.07 |
| 0 - 26 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.09 | 0.02 | 0.01 | 0.01 | 0.07 |
| 0 - 27 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.09 | 0.02 | 0.01 | 0.01 | 0.07 |
| 0 - 28 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.09 | 0.02 | 0.01 | 0.01 | 0.08 |
| 0 - 29 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.09 | 0.02 | 0.01 | 0.01 | 0.08 |
| 0 - 30 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.09 | 0.02 | 0.01 | 0.01 | 0.08 |

Sizewell B NPS (Reactor Building)

Max SPF with rotation of 10° = 0.35 in sector I at 0-4 km (Note sector I now lies between 230°and 260).

| Radial Band (km) | A | B | C | D | E | F | G | H | I | J | K | L | All |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 - 1 | | | | | | | | | | | | | |
| 0 - 2 | 0.00 | 0.000 | 0.000 | 0.00 | 0.00 | 0.01 | 0.04 | 0.01 | 0.11 | 0.00 | 0.00 | 0.00 | 0.07 |
| 0 - 3 | 0.00 | 0.000 | 0.000 | 0.00 | 0.00 | 0.01 | 0.02 | 0.01 | 0.31 | 0.06 | 0.11 | 0.00 | 0.22 |
| 0 - 4 | 0.00 | 0.000 | 0.000 | 0.00 | 0.00 | 0.01 | 0.03 | 0.01 | 0.35 | 0.05 | 0.09 | 0.00 | 0.23 |
| 0 - 5 | 0.00 | 0.000 | 0.000 | 0.00 | 0.00 | 0.00 | 0.03 | 0.02 | 0.30 | 0.04 | 0.07 | 0.00 | 0.19 |
| 0 - 6 | 0.00 | 0.000 | 0.000 | 0.00 | 0.00 | 0.00 | 0.02 | 0.02 | 0.25 | 0.03 | 0.06 | 0.00 | 0.17 |
| 0 - 7 | 0.00 | 0.000 | 0.000 | 0.00 | 0.00 | 0.00 | 0.04 | 0.02 | 0.22 | 0.03 | 0.06 | 0.01 | 0.16 |
| 0 - 8 | 0.00 | 0.000 | 0.000 | 0.00 | 0.00 | 0.00 | 0.04 | 0.01 | 0.20 | 0.03 | 0.05 | 0.01 | 0.15 |
| 0 - 9 | 0.00 | 0.000 | 0.000 | 0.00 | 0.00 | 0.00 | 0.04 | 0.01 | 0.19 | 0.04 | 0.05 | 0.01 | 0.14 |
| 0 - 10 | 0.00 | 0.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.01 | 0.18 | 0.04 | 0.05 | 0.01 | 0.14 |
| 0 - 11 | 0.00 | 0.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.01 | 0.16 | 0.04 | 0.05 | 0.00 | 0.13 |
| 0 - 12 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.01 | 0.15 | 0.04 | 0.04 | 0.01 | 0.12 |
| 0 - 13 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.01 | 0.15 | 0.04 | 0.04 | 0.01 | 0.12 |
| 0 - 14 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.01 | 0.14 | 0.04 | 0.04 | 0.01 | 0.11 |
| 0 - 15 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.01 | 0.13 | 0.04 | 0.04 | 0.01 | 0.11 |
| 0 - 16 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.01 | 0.13 | 0.03 | 0.04 | 0.01 | 0.11 |
| 0 - 17 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.01 | 0.13 | 0.03 | 0.04 | 0.01 | 0.11 |
| 0 - 18 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.12 | 0.03 | 0.03 | 0.01 | 0.10 |
| 0 - 19 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.12 | 0.03 | 0.03 | 0.01 | 0.10 |
| 0 - 20 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.12 | 0.03 | 0.03 | 0.01 | 0.10 |
| 0 - 21 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.11 | 0.03 | 0.03 | 0.01 | 0.10 |
| 0 - 22 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.11 | 0.03 | 0.03 | 0.01 | 0.09 |
| 0 - 23 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.11 | 0.03 | 0.03 | 0.01 | 0.09 |
| 0 - 24 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.11 | 0.03 | 0.03 | 0.01 | 0.09 |
| 0 - 25 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.11 | 0.03 | 0.03 | 0.01 | 0.09 |
| 0 - 26 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.10 | 0.03 | 0.03 | 0.01 | 0.09 |
| 0 - 27 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.10 | 0.03 | 0.03 | 0.01 | 0.09 |
| 0 - 28 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.10 | 0.03 | 0.03 | 0.01 | 0.09 |
| 0 - 29 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.10 | 0.03 | 0.03 | 0.01 | 0.09 |
| 0 - 30 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.10 | 0.03 | 0.03 | 0.01 | 0.09 |