Office for Nuclear Regulation

An agency of HSE

CIVIL NUCLEAR REACTOR PROGRAMME NEW BUILD LICENSING

HINKLEY POINT C NUCLEAR SITE LICENSING LICENCE CONDITION 02: MARKING OF THE SITE BOUNDARY

Assessment Report: ONR-CNRP-AR-12-120

Revision 1 18 January 2013

Office for Nuclear Regulation

An agency of HSE

ASSESSMENT REPORT

Site:	Hinkley Point C		
Project: NNB Generation Company Ltd's application for Nuclear Site lic install and operate two EPR™ units at Hinkley Point C.			
Title:	Licence Condition Compliance Arrangements Intervention.		
Licence Number: NA (Pre-licence granting)			
Licence Condition(s): LC2: Marking of the site boundary			
IIS Rating: 3			
COIN Service Order: N/A			

Document Identifier

Identifier	Revision	TRIM Reference(s)
ONR-CNRP-AR-12-120	1	2012/370684

Step-based Document Review

Step	Description	Role	Name	Date	TRIM Revision*
1	Initial draft, including identification and mark-up of SNI/CCI	Author		20/11/12	11
2	Main editorial review	Author			
3	Peer Review in accordance with AST/005 Issue 1	Peer Reviewer	N/A		
4	Assessor update / sentencing of comments and return to Peer Reviewer – Revision 0	Author	N/A		
5	Final editorial / clean draft review	Author		20/11/12	13
6	Acceptance review in accordance with AST/003 Issue 4	AUH			
7	Report Sign-off	Author / Peer Reviewer / AUH			

Document Acceptance (Revision 0)

Role	Name	Position	Signature	Date
Author		HM Inspector		20/11/2012
Peer Review				
Acceptance [†]		HM Superintending Inspector		20/11/2012

^{*} TRIM revision to be identified upon completion of activity and incorporation of any changes to document.

[†] Hard-copy of document signed-off, TRIM version updated with authors / approver / acceptor names and dates and record finalised.

Office for Nuclear Regulation

An agency of HSE

ASSESSMENT REPORT

Document Acceptance (Revision 1)

Role	Name	Position	Signature	Date
Author		HM Inspector		18/01/2013
Peer Review for Publication		HM Inspector		18/01/2013
Acceptance for Publication		HM Superintending Inspector		08/02/2013

Revision History

Revision	Date	Author(s)	Reviewed By	Accepted By	Description Of Change
0	20/10/12		N/A		First formal issue.
1	18/01/13				Minor editorial changes.

Circulation (latest issue)

Organisation	Name
ONR	
	CNRP NNB GenCo LC Workstream Lead Assessors

Office for Nuclear Regulation

Report ONR-CNRP-AR-12-120 Revision 1

An agency of HSE

COPYRIGHT

© Crown copyright 2013

You may reuse this information (excluding logos) free of charge in any format or medium, under the terms of the Open Government Licence. To view the licence visit www.nationalarchives.gov.uk/doc/open-government-licence/, write to the Information Policy Team, The National Archives, Kew, London TW9 4DU, or email psi@nationalarchives.gsi.gov.uk.

Some images and illustrations may not be owned by the Crown so cannot be reproduced without permission of the copyright owner. Enquiries should be sent to copyright@hse.gsi.gov.uk.

Unless otherwise stated, all corporate names, logos, and Registered® and Trademark $^{\text{TM}}$ products mentioned in this Web site belong to one or more of the respective Companies or their respective licensors. They may not be used or reproduced in any manner without the prior written agreement of the owner(s).

For published documents, the electronic copy on the ONR website remains the most current publically available version and copying or printing renders this document uncontrolled.

EXECUTIVE SUMMARY

Background and Scope.

NNB Generation Company Ltd (NNB GenCo) has formally applied to ONR for a nuclear site licence (NSL) to install and operate two EPR^{TM} reactor units at Hinkley Point C (HPC) in Somerset.

This report presents the findings of ONR's assessment which focused on development of arrangements for compliance with Licence Condition 02: Marking of the site boundary.

Intervention Strategy

ONR has concluded a programme of intervention that has examined NNB GenCo's arrangements for complying with Licence Condition (LC) 02: Marking the site boundary. During the course of a programme of meetings and inspections ONR has engaged in dialogue which has informed improvements to the procedures for:

- preventing unauthorised persons from entering the site or parts of the site; and
- erecting and maintaining fences or markings to define the boundary to the nuclear site licence area.

The intervention examined compliance procedures and the underlying compliance thread and also included visits to site to inspect implementation of the arrangements.

Matter Arising: Exclusion of Condition LC02(4) - Erect and Maintain Boundary Fences or Marking.

During the early stages of the construction schedule NNB GenCo will undertake site preparation, major earthworks and preparation of the formation level for construction of the plant. ONR has accepted that erecting and maintaining nuclear site boundary markings during this stage is impracticable and could expose personnel to an unacceptable risk of injury. Therefore, ONR has agreed to exclude LC02(4) from the NNB GenCo HPC nuclear site licence until such time as it is practicable to erect and maintain an appropriate means of marking the nuclear site boundary.

Conclusions of Intervention.

I conclude that:

For the purposes of granting a nuclear site licence, NNB GenCo has developed and implemented adequate arrangements for preventing unauthorised persons from entering the nuclear licence site.

NNB GenCo procedure for controlling regulator approved management arrangements provides adequate control of such part or parts the LC02 arrangements approved by the Executive.

NNB GenCo has demonstrated to the ONR Site Inspector that:

it can accurately mark the position of the boundaries to the HPC nuclear licensed site by fences or other appropriate means;

it has erected appropriate signage along the boundary with the Hinkley Point A and Hinkley Point B licensed sites.

NNB GenCo has produced a permanent record data file containing the Global Positioning System and Ordnance Survey co-ordinates required to accurately locate the boundary to the HPC nuclear site licence area as defined by the drawing entitled Hinkley Point C Nuclear Power Station Licence Site Area.

NNB GenCo's arrangements support ONR's proposal to exclude LC02(4) from the NNB GenCo HPC nuclear site licence (NSL) until such time as it is safe and practicable to erect and maintain an appropriate means of marking the nuclear site boundary.

Until such time as it is practicable to mark the NSL boundary:

- NNB GenCo's site induction training will inform all personnel entering the HPC development site of the existence and location of the HPC nuclear site licence area; and,
- plans posted at vehicle and pedestrian accesses to the site will illustrate the location of the nuclear site licence area.

NNB GenCo is committed to applying to ONR for a variation to the HPC NSL to introduce clause LC02(4) and to mark the site boundary by fences or other appropriate means 12 months after pouring the 1st nuclear island concrete.

Office for Nuclear Regulation

Report ONR-CNRP-AR-12-120 Revision 1

An agency of HSE

For the purposes of granting a nuclear site licence, NNB GenCo has proposed adequate arrangements for inspecting and maintaining fences and markings erected along the boundary to the nuclear site licence area

Recommendations.

I recommend that:

ONR excludes clause LC02(4) from the NNB GenCo Hinkley Point C nuclear site licence until such time as it is practicable to erect and maintain an appropriate means of marking the nuclear site boundary

ONR accepts that NNB GenCo's arrangements for complying with Licence Condition 02: Marking of the site boundary; are adequate for the purpose of granting a nuclear site licence.

Report ONR-CNRP-AR-12-120 Revision 1

An agency of HSE

LIST OF ABBREVIATIONS

ALARP As low as is reasonably practicable

BSL Basic Safety level (in SAPs)

BSO Basic Safety Objective (in SAPs)

BMS (ONR) How2 Business Management System

CSSP Construction Site Security Plan

EPRTM Trade Mark of European pressurised water reactor

GPS Global Positioning System

HSE Health and Safety Executive ("the Executive")

IAEA International Atomic Energy Agency

LC Licence Condition

ONR Office for Nuclear Regulation (an agency of HSE)

OS Ordnance Survey

PCER Pre-construction Environment Report

PCSR Pre-construction Safety Report

PID Project Initiation Document

PSA Probabilistic Safety Assessment

PSR Preliminary Safety Report

NSL Nuclear Site Licence

RGP Relevant Good Practice

SAP Safety Assessment Principle(s) (HSE)
SFAIRP So far as is reasonably practicable

SSC System, Structure and Component

TAG Technical Assessment Guide(s) (ONR)

TSC Technical Support Contractor

WENRA Western European Nuclear Regulators' Association

TABLE OF CONTENTS

1	INTRODUCTION	1
	1.1 Background	1
	1.2 Scope	1
	1.3 Methodology	1
2	ASSESSMENT STRATEGY	2
	2.1 Standards and Criteria	2
	2.2 Intervention Strategy	2
	2.3 Integration with other licence Conditions	2
	2.4 Out-of-scope Items	2
3	LICENCE APPLICANT'S SAFETY CASE	3
4	ONR ASSESSMENT	4
	4.1 Scope of Assessment Undertaken	4
	4.2 Assessment	4
	4.2.1 Development of Arrangements – Compliance Matrix and Compliance Thread	14
	4.2.2 Implementation of LC02 Arrangements	8
5	CONCLUSIONS AND RECOMMENDATIONS	10
	5.1 Conclusions	10
	5.2 Recommendations	10
6	REFERENCES	11

Tables

- Table 1: Level 4 Meetings and Interventions to Discuss LC02: Marking of the site boundary
- Table 2: Licence Condition 02: Marking of the Site Boundary NNB GenCo Compliance Arrangements

1 INTRODUCTION

1.1 Background

- NNB Generation Company Ltd (NNB GenCo) has formally applied to ONR for a nuclear site licence (NSL) to install and operate two EPR[™] reactor units at Hinkley Point C in Somerset (Ref 1).
- This report presents the findings of ONR's assessment of NNB GenCo's arrangements for complying with Licence Condition (LC) 02: Marking of the Site Boundary. The assessment was informed by a programme of meetings and intervention spanning the period February 2010 to July 2012. Assessment was undertaken in accordance with the requirements of the Office for Nuclear Regulation (ONR) How2 Business Management System (BMS) procedure AST/003 (Ref. 2).

1.2 Scope

The scope of this report covers the adequacy of NNB GenCo's arrangements for complying with LC02: Marking of the Site Boundary; for the purposes of supporting its application for a nuclear site licence.

1.3 Methodology

- The methodology for the assessment follows ONR BMS document AST/003, Assessment Process (Ref. 2), in relation to mechanics of assessment within the Office for Nuclear Regulation (ONR).
- This assessment focused upon NNB GenCo's arrangements for preventing unauthorised persons from entering the site and for marking the site boundary by fences or other appropriate means. It examined development of the arrangements and implementation of procedures. The assessment is informed by ONR(CNS) assessment of NNB's arrangements for preventing unauthorised persons accessing the site or parts of the site.

2 ASSESSMENT STRATEGY

The assessment strategy for NNB GenCo's arrangements for complying with LC02: Marking of the Site Boundary; is set out in this section. This identifies the scope of the assessment and the standards and criteria that have been applied.

2.1 Standards and Criteria

7 This LC requires the licensee to make and implement arrangements to prevent unauthorised persons entering the site and also for marking the boundaries to the site. There are no nuclear industry specific standards or criteria relating to this LC.

2.2 Intervention Strategy

- The assessment followed ONR's Intervention Strategy (Ref 3), and was informed by a programme of level 4 dialogue which aimed to examine:
 - NNB compliance matrix and compliance thread for each condition sub clause;
 - communication of arrangements to relevant personnel, i.e. training;
 - implementation of arrangements;
 - dialogue on NNB GenCo's self regulation activities.
- 9 The intervention gave particular attention to:
 - the arrangements for preventing unauthorised persons entering the site, both administrative and physical;
 - the arrangements for marking the site boundaries by fences or other appropriate means:
 - the arrangements for maintaining fences and other boundary markings.

2.3 Integration with other licence Conditions

- 10 LC09 requires the licensee to ensure that every person authorised to be on the site receives adequate instructions as to regards the risks and hazards associated with the plant and its operation.
- 11 LC16(1)requires the licensee to submit to the Executive adequate plan of the site showing the location of the site boundary.

2.4 Out-of-scope Items

12 None identified.

Office for Nuclear Regulation

Report ONR-CNRP-AR-12-120 Revision 1

An agency of HSE

3 LICENCE APPLICANT'S SAFETY CASE

- NNB GenCo is not required to present a formal safety case for its arrangements for complying with conditions attached to the nuclear site licence.
- Part 4 of the application (Ref 1) entitled Nuclear Site Licence Compliance Matrix: Hinkley Point C (Ref 4) identifies those procedures and documents within NNB GenCo's Integrated Management System (IMS) that achieve compliance with the licence conditions attached to the standard nuclear site licence. The Compliance Matrix identifies two groups of licence conditions.
 - Group 1 Licence Conditions required for activities that NNB GenCo expect to undertake during the construction and installation phases of the project. ONR expect the arrangements for these LC to be developed sufficiently to be fit for purpose at the time of NSL granting.
 - Group 2 Licence Conditions required for activities that NNB GenCo will undertake during commissioning, operation and decommissioning phases of the project. NNB GenCo has provided a commitment to develop the necessary arrangements for complying with these LCs in the future.
- LC 02: Marking of the site boundary; is designated Group 1 and therefore ONR expects NNB GenCo to have fit for purpose arrangements at the time of NSL grant.

4 ONR ASSESSMENT

4.1 Scope of Assessment Undertaken

- The aim of the intervention that informed this assessment was to judge the adequacy of NNB GenCo's arrangements for preventing unauthorised persons entering the site and for marking the site boundary. The principal objective is to inform ONR's decision on whether to grant NNB GenCo a nuclear site licence. Thus ONR's intervention strategy (Ref 3) comprises the following elements.
 - Development of arrangements. Examine NNB's Compliance matrix entry (procedures) and the underlying compliance thread (supporting arrangements, guidance etc.).
 - Competence and Training. Examine the arrangements for developing training material and identifying the target roles and functions. Sample training packages and observe training.
 - Implementation. Seek opportunities to inspect implementation of arrangements.
 - Self Regulation. Discuss key findings and lessons learned from the licence applicant's own self assessment of its arrangements.
- The extent of ONR's consideration of the above elements is dependent upon NNB GenCo's project schedule. Immediately prior to, and for some time following, licence grant NNB GenCo will be engaged in site preparatory works followed by major earthworks. During these early stages of the project the principal means of preventing unauthorised persons entering the site are: the fence erected at the perimeter of the development site; and the administrative controls exercised by security personnel located in the security lodge adjacent to site entrance. ONR's intervention focused on development of arrangements considered fit for purpose at the time of licence grant.
- ONR's assessment was informed by dialogue with NNB GenCo during the course of the programme of L4 meetings listed at Table 1.

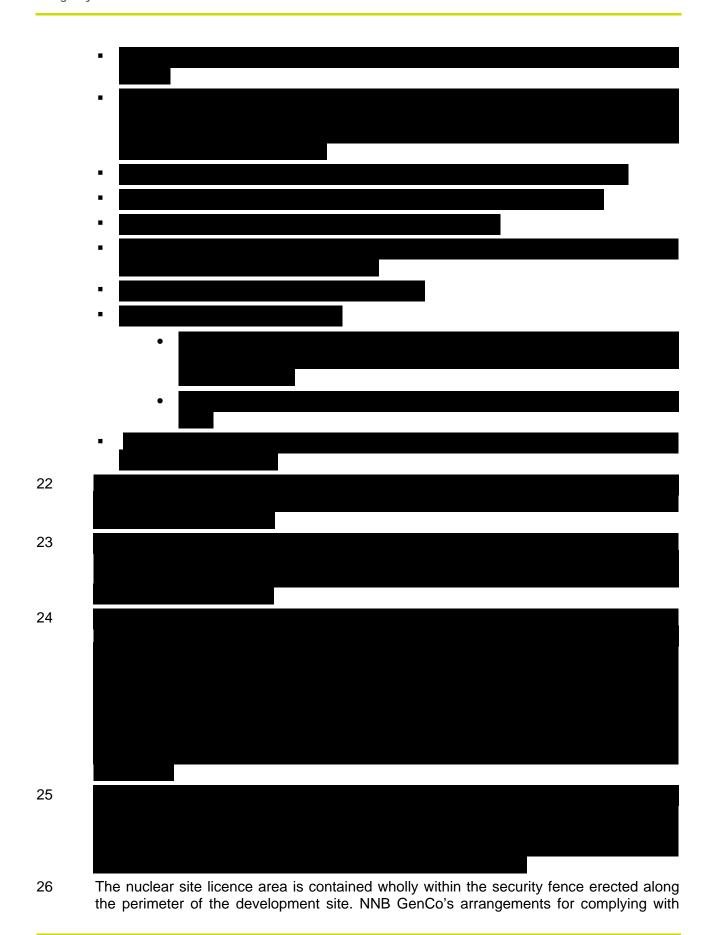
4.2 Assessment

4.2.1 Development of Arrangements – Compliance Matrix and Compliance Thread

- The arrangements for compliance with LC02 require a licensee's arrangements for compliance to:
 - provide a system of rigorous and appropriate control to prevent unauthorised persons entering the site, or parts of the site;
 - mark the boundaries of the site by fences or other appropriate means.
- Table 2 lists the NNB GenCo procedures that comprise its arrangements for complying with LC02.

4.2.1.1 LC02(1).

The Compliance Matrix (Ref 4) identifies the NNB GenCo procedure "Control Access of People to Sites" as defining the arrangements for preventing unauthorised persons from entering the site. This procedure describes the requirements for the control of people who request physical access to NNB GenCo sites, including Hinkley Point C. It applies to all NNB staff, contractors, sub-contractors or other third parties who have legitimate reason to access the Hinkley Point development site and/or the nuclear site licence area.



- LC02(1) includes the instruction "Maintenance of Perimeter Fence, Gates and Access Track (HPC)". This document has a key objective of maintaining the integrity of the perimeter security fence. Thus at the point of granting NNB GenCo will claim that the arrangements for preventing unauthorised persons from entering development site are adequate for controlling access to the nuclear licence site area.
- LC02(1) gives the Executive the primary power to direct the licensee to prevent unauthorised persons entering such part or parts thereof as the Executive may specify. The compliance matrix entry refers to the relevant NNB GenCo procedure for responding to ONR's use of this primary power.
- ONR concludes that, for the purposes of granting a nuclear site licence, NNB GenCo has developed and implemented adequate arrangements for preventing unauthorised persons from entering the nuclear licence site.

4.2.1.2 LC02(2) and LC02(3)

- These LCs give the Executive primary powers to approve arrangements. The compliance matrix refers to the procedure for control of regulator approved management arrangements.
- ONR is satisfied that the NNB GenCo procedure for controlling regulator approved management arrangements provides adequate control of such part or parts the LC02 arrangements approved by the Executive.

4.2.1.3 LC02(4)

- The Compliance Matrix indentifies the procedure "Marking the Site Boundary" as defining the arrangements for managing the HPC nuclear site licence boundary throughout all phases of the HPC project. The procedure includes the following key process.
 - Establish and demonstrate HPC nuclear site licence boundary.
 - Mark HPC nuclear site licence boundary
 - Maintain and inspect the HPC nuclear site licence boundary markings.
 - Modify HPC nuclear site licence boundary markings.

4.2.1.3.1 Marking the Site Boundary

- During the early stages of the construction schedule NNB GenCo will undertake site preparation, major earthworks and preparation of the formation level for construction of the plant. These early activities will require the use of heavy machinery and also continual changes to the site levels over an area that is likely to envelope the nuclear site licence area. ONR has accepted that erecting and maintaining nuclear site boundary markings during this stage is impracticable and could expose personnel to an unacceptable risk of injury.
- In August 2010 the Licensing Unit prepared a proposal for excluding LC02(4) from the NNB GenCo HPC nuclear site licence until such time as it became practicable to erect and maintain an appropriate means of marking the nuclear site boundary. The minute entitled "Agreement to variation of LC2(4) at Hinkley Point" dated 7 February 2012, (Ref 6) records the acting Chief Inspector's acceptance of the proposal subject to the licensee:
 - posting plans showing the location of the nuclear licensed site area at appropriate locations on the development site; and,

- informing all persons entering the development site of the responsibilities associated with entry onto a licensed site.
- The process "Establish & demonstrate the HPC NSL Boundary" includes the following activities.
 - Establish the location of the NSL boundary from the drawing entitled "HPC Nuclear Power Station Licensed Site Area" (Ref 7).
 - Incorporate illustration of development site showing location of the HPC NSL boundary into the HPC Site Induction Training Material.
 - Post illustrations of development site showing the location of HPC NSL boundary at appropriate locations on the development site.
 - Generate NSL boundary location data (GPS coordinates).
 - Conduct on site walk down to demonstrate ability to accurately locate the boundary to the nuclear licensed site.
- This process is completed prior to granting a NSL. On 27 September 2012 ONR visited site to inspect NNB's capability to accurately mark the boundaries of the Hinkley Point C (HPC) nuclear licensed site by fences or other appropriate means. On 14 November 2012 ONR paid a second visit to inspect marking of the boundaries between Hinkley Point A, Hinkley Point B and Hinkley Point C and the quality plans for the Hinkley Point C boundary and the nuclear site licence implementation. Section 4.2.2 below reports the key findings and recommendations from the visits which informed the following conclusions.
 - NNB GenCo has demonstrated to the ONR Site Inspector that:
 - it can accurately mark the position of the boundaries to the HPC nuclear licensed site by fences or other appropriate means;
 - it has erected appropriate signage along the boundary with the Hinkley Point A and Hinkley Point B licensed sites.
 - NNB has produced a permanent record data file containing the GPS and OS coordinates required to accurately locate the boundary to the HPC nuclear site licence area as defined by the drawing entitled Hinkley Point C Nuclear Power Station Licence Site Area (Ref 7).
 - NNB GenCo's arrangements support ONR's proposal to exclude LC02(4) from the NNB GenCo HPC nuclear site licence until such time as it is safe and practicable to erect and maintain an appropriate means of marking the nuclear site boundary.
 - Until such time as it is practicable to mark the NSL boundary:
 - NNB GenCo's site induction training will inform all personnel entering the HPC development site of the existence and location of the HPC nuclear site licence area; and,
 - plans posted at vehicle and pedestrian accesses to the site will illustrate the location of the nuclear site licence area.
- NNB GenCo has advised that it is practicable to mark the NSL boundary 12 months after the pouring 1st nuclear island concrete. As such, NNB GenCo has written (Ref 8) confirming its commitment to implement the processes for marking, maintaining'/inspecting and modifying the HPC NSL boundary and apply to ONR for a

variation to the HPC NSL to introduce clause LC02(4). ONR's decision to grant the variation will be informed by a site inspection of these processes and a walk down of the marked HPC boundary.

ONR is satisfied that NNB GenCo is committed to applying to ONR for a variation to the HPC NSL to introduce clause LC02(4) and to mark the site boundary by fences or appropriate means 12 months after pouring the 1st nuclear island concrete.

4.2.1.3.2 Inspection and Maintenance of Boundary fences and Markings.

- The procedure "Marking the Site Boundary" specifies that NNB shall inspect fences and markings erected along the nuclear site licence boundary quarterly and record the findings in an inspection report. The procedure also addresses preventative and reactive maintenance of the fences and markings. The quarterly inspection reports inform the annual report, which is archived as a permanent record under the arrangements for compliance with LC06. Other archived permanent records include the drawing of he nuclear site licence area, modifications to boundary fences and markings, and an assessment of the boundary marking installation against the relevant specification.
- ONR is satisfied that, for the purposes of granting a nuclear site licence, NNB GenCo has proposed adequate arrangements for inspecting and maintaining fences and markings erected along the boundary to the nuclear site licence area.

4.2.1.4 LC02(5).

This LC gives the Executive the primary power to direct the licensee to erect and maintain fences in such positions as the executive may specify. The compliance matrix refers to the relevant NNB GenCo procedure for responding to ONR's use of this primary power and the instruction for maintaining fences etc.

4.2.2 Implementation of LC02 Arrangements.

- On 27 September 2012 ONR visited site to inspect NNB's capability to accurately mark the boundaries of the Hinkley Point C (HPC) nuclear licensed site by fences or other appropriate means The inspection comprised:
 - inspection of the NNB specification for demonstration of the Hinkley Point C nuclear licensed site boundary;
 - a walk of the nuclear site licence boundary;
 - discussion of proposals for marking the boundaries shared by the Hinkley Point A (HPA), Hinkley Point B (HPB) and Hinkley Point C (HPC) nuclear licensed sites;
 - the permanent record data file containing the Global Positioning System (GPS) and Ordnance Survey (OS) co-ordinates that fully define the location of the boundary; and.
- The ONR Intervention Report IR12190 reports ONR's visit to site and records the following key findings.
 - ONR is satisfied that NNB has produced a permanent record data file containing the GPS and OS co-ordinates required to accurately locate the boundary to the HPC nuclear site licence area. This boundary accords with the drawing NNB submitted for compliance with Licence Condition 16(1)

- During a walk of the site boundary NNB demonstrated that it is able to accurately mark the position of the boundary by fences or other appropriate means using the GPS and OS data contained in the permanent record data file.
- NNB has produced the necessary induction training material required to inform all personnel entering the development site of the existence and location of the HPC nuclear site licence area.
- MAGNOX Ltd, EDF Nuclear Generation Ltd and NNB GenCo have yet to mark the boundary shared by the HPA, HPB and HPC nuclear licensed sites.
- The report also recommends that ONR visit site prior to granting HPC a nuclear site licence to inspect:
 - marking of the boundary shared by the HPA, HPB and HPC nuclear licensed sites; and,
 - the posting of illustrations of the HPC nuclear site licence boundary at access points to the HPC development site and also adjacent to the nuclear site licence conditions posted for compliance with Nuclear Installations Act 1965.
- The report concluded that NNB has demonstrated that it can accurately mark the position of the boundaries to the HPC nuclear licensed site by fences or other appropriate means.
- On 14 November 2012 ONR paid a second visit to site to inspect marking of the boundaries between Hinkley Point A, Hinkley Point B and Hinkley Point C and the quality plans for the Hinkley Point C boundary and the nuclear site licence implementation.
- 46 The inspection comprised:
 - inspection of the signage marking the boundaries between Hinkley Point A and Hinkley point C and between Hinkley Point B and Hinkley Point C;
 - inspection of the nuclear site licence notice board in the security lodge;
 - discussion of the following quality plans:
 - o HPC Boundary Quality Plan;
 - o HPC Nuclear Site Licence Implementation.
- The ONR Intervention Report IR12205 reports ONR's visit to site and records the following key findings relevant to NNB GenCo's application for a licence.
 - The signage that NNB propose to erect at vehicle and pedestrian accesses to HPC, as well as at the security lodge, is adequate for the purposes of granting a nuclear site licence and support ONR's decision to exclude clause 4 to Licence Condition 02.
 - During the course of the visit NNB GenCo agreed to enhance the signage at the vehicle and pedestrian accesses to the HPC nuclear licence site.
- The report concluded that NNB's proposals for signage at vehicle and pedestrian accesses between HPB and HPC, for the common HPB/HPC NSL boundary and at the security lodge are acceptable for the purposes of granting a site licence. The signage supports ONR's proposal to exclude LC02(4) from the NNB GenCo HPC nuclear site licence until such time as it is safe and practicable to erect and maintain an appropriate means of marking the nuclear site boundary.

5 CONCLUSIONS AND RECOMMENDATIONS

ONR has concluded a programme of intervention that has examined NNB GenCo's arrangements for complying with Licence Condition 02: Marking of the site boundary. During the course of a programme of meetings and inspections ONR has engaged in dialogue which has informed improvements to the procedures that NNB GenCo has implemented ahead of licence granting. The intervention has informed ONR's judgement on the adequacy of NNB GenCo's arrangements and lead to the following conclusions and recommendations.

5.1 Conclusions

- For the purposes of granting a nuclear site licence, NNB GenCo has developed and implemented adequate arrangements for preventing unauthorised persons from entering the nuclear licence site.
- NNB GenCo procedure for controlling regulator approved management arrangements provides adequate control of such part or parts the LC02 arrangements approved by the Executive.
- 52 NNB GenCo has produced a permanent record data file containing the GPS and OS coordinates required to accurately locate the boundary to the HPC nuclear site licence area as defined by the drawing entitled Hinkley Point C Nuclear Power Station Licence Site Area.
- NNB GenCo's arrangements support ONR's proposal to exclude LC02(4) from the NNB GenCo HPC nuclear site licence until such time as it is safe and practicable to erect and maintain an appropriate means of marking the nuclear site boundary.
- Until such time as it is practicable to mark the NSL boundary:
 - NNB GenCo's site induction training will inform all personnel entering the HPC development site of the existence and location of the HPC nuclear site licence area; and.
 - plans posted at vehicle and pedestrian accesses to the site will illustrate the location of the nuclear site licence area.
- NNB GenCo is committed to applying to ONR for a variation to the HPC NSL to introduce clause LC02(4) and to mark the site boundary by fences or other appropriate means 12 months after pouring the 1st nuclear island concrete.
- ONR is satisfied that, for the purposes of granting a nuclear site licence, NNB GenCo has proposed adequate arrangements for inspecting and maintaining fences and markings erected along the boundary to the nuclear site licence area.

5.2 Recommendations

- ONR should exclude clause 4 of LC02 from the NNB GenCo Hinkley Point C nuclear site licence until such time as it is practicable to erect and maintain an appropriate means of marking the nuclear site boundary
- ONR should accept that NNB GenCo's arrangements for complying with Licence Condition 02: Marking of the site boundary; are adequate for the purpose of granting a nuclear site licence

Office for Nuclear Regulation

Report ONR-CNRP-AR-12-120 Revision 1

An agency of HSE

6 REFERENCES

- NNB GenCo letter ONR-OSL-RIO-000061 dated 29 July 2012. Application for Nuclear Site Licence for Hinkley Point. TRIM 2011/442090
- 2 ONR How2 Permissioning Reports. AST/003 Issue 4. HSE. August 2011. www.hse.gov.uk/nuclear/operational/assessment/index.htm.
- CNRP New Civil Reactor Build. NNB GenCo Ltd's Application for a Nuclear Site Licence to Install and Operate Two EPRTM Reactor Units at Hinkley Point. ONR Intervention Strategy. TRIM 2012/61973.
- 4 NNB GenCo Company Document Nuclear Site Licence Compliance Matrix: Hinkley Point C. NNB-OSL-PRO-000046, (Part 4 to Ref1).
- 5 ONR Assessment Report: Hinkley Point C Nuclear Site Licensing Security ONR-CNRP-AR-12-094. TRIM 2012/282606.
- ONR Minute: Agreement to variation of LC2(4)at Hinkley Point. Dated 16 August 2010. TRIM 2010/358861.
- 7 NNB GenCo drawing Hinkley Point C Nuclear Power Station Licence Site Area NNB-OSL-DRW-000001 TRIM 2012/397365
- 8 NNB GenCo letter ONR ONR-HPC-20282N dated 27 September 2012. Commitment re. Marking the Hinkley Point C (HPC) Nuclear Site Licence (NSL) Boundary. TRIM 2012/378430

Table 1

Level 4 Meetings and Interventions to Discuss LC02: Marking of the site boundary

Date	Location	Торіс	CR/IR No.	TRIM Ref.				
Pre-NSL Ap	Pre-NSL Application							
24/02/10	HPC	NNB/BEGL Licence Arrangements for construction area.	CR10001	2010/114802				
04/04/10	Bristol	UK Nuclear Project – Level 4 Minutes of Level 4 Site Boundaries Meeting between NNB GenCo, NII, HSE FOD, TSE and OCNS	CR100126	2010/271400				
23/07/10	Bootle	Security of tenure for HPC plus the LC2 and LC3 issues which arise for HPB during preparatory works.	CR100098	2010/484137				
Post-NSL A	pplication							
20/10/11	HPC	NNB/ONR Work stream 05 Level 4 LC2, 16 and Security Update	IR11200	2011/611440				
25/01/12	HPC	NNB LC2 compliance for ONR NSL intervention purposes.	IR12249	2012/62195				
20/03/12	HPC	NNB LC2 compliance for ONR NSL intervention purposes.	IR12040	2012/145137				
22/05/12	HPC	Level 4 LC2 Intervention meeting	IR12100	2012/289355				
18/07/12	HPC	Licence Condition 2 Marking Of the Site Boundary - Hinkley Point C Nuclear Site Licence Application intervention closure meeting	IR12173	2012/343126				
27/09/12	HPC	LC2 - HPC Nuclear Site Licence Application Intervention Walking the Licence Site Boundary	IR12190	2012/395948				
14/11/12	HPC	LC2 - HPC Nuclear Site Licence Application Intervention - Marking of Site Boundary with Hinkley Point A&B	IR12205	2012/451928				

Report ONR-CNRP-AR-12-120 Revision 1

An agency of HSE

Table 2

Licence Condition 02: Marking of the Site boundary NNB GenCo Compliance Arrangements

LC Clause	NNB GenCo Procedure	Document Reference	
LC02(1)	Control of People to Sites	NNB-OSLPRO-000063	
	Maintenance of Perimeter Fence, Gates and Access Track HPC	HPC-NNBPCP-XX-INS- 0000261	
	Management of Interfaces with Regulators	NNB-OSL-PRO-000061	
LC02(2)	Control of Approved Arrangements	NNB-FIN-PRO-000079	
LC02(3)	Control of Approved Arrangements	NNB-FIN-PRO-000079	
LC02(4)	Marking the Site Boundary	NNB-OSL-PRO-000002	
LC02(5)	Management of Interfaces with Regulators	NNB-OSL-PRO-000061	
	Maintenance of Perimeter Fence, Gates and Access Track HPC	HPC-NNBPCP-XX-INS- 0000261	