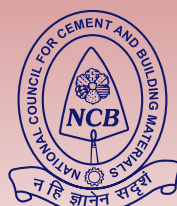


# CENTRE FOR INDUSTRIAL INFORMATION SERVICES



**NATIONAL COUNCIL FOR CEMENT AND BUILDING MATERIALS**  
Under the Administrative Control of Ministry of Commerce & Industry, Govt. of India



## ABOUT THE COUNCIL

National Council for Cement and Building Materials (NCB), set up in 1962, then known as Cement Research Institute of India, is the apex body in India under the administrative control of Department of Industrial Policy and Promotion, Ministry of Commerce and Industry, government of India, devoted to research, technology development and transfer, education and industrial services for cement, building materials and construction industries. Its multi-disciplinary activities are performed in an integrated and coordinated manner through its units that are located at Ballabgarh (Near Delhi), Hyderabad, Ahmedabad and Project Office at Bhubaneswar. The six corporate centres of the council guide the activities at different units. The Centre and their main areas of activity are:

**Centre for Construction Development & Research (NCB-CDR)** - Concrete Technology, Structural Assessment and Rehabilitation, Structural Optimization & Design and Construction Technology & Management

**Centre for Cement Research & Independent Testing (NCB-CRT)** - Fundamental and Basic Research, Cement and other Binders, Waste Utilization, Refractories & Ceramics and Testing Services.

**Centre for Mining, Environment, Plant Engineering & Operation (NCB-CME)** - Geology, Mining & Raw Materials, Process Optimization & Productivity Enhancement, Energy Management, Plant Maintenance, Project Engineering & System Design, Environmental Management.

**Centre for Industrial Information Services (NCB-CIS)** - Industrial Information and Data Bank, Integrated IT Solutions, Publication, Seminars & Conferences, International & National Linkages, Image Building.

**Centre for Continuing Education Services (NCB-CCE)** - Long-Term & Short-Term Courses, Special Group Training Programmes, Simulator Based Courses, Workers Development Programmes.

**Centre for Quality Management, Standards & Calibration Services (NCB-CQC)** - Total Quality Management, Calibration Services, Development and Supply of Certified Reference Materials.

### OUR VISION

Be a preferred technology partner to cement and construction sectors in the sustainable development of a better infrastructure and housing.

### OUR MISSION

Research and Development of innovative technologies, their transfer and implementation in partnership with cement and construction industries.

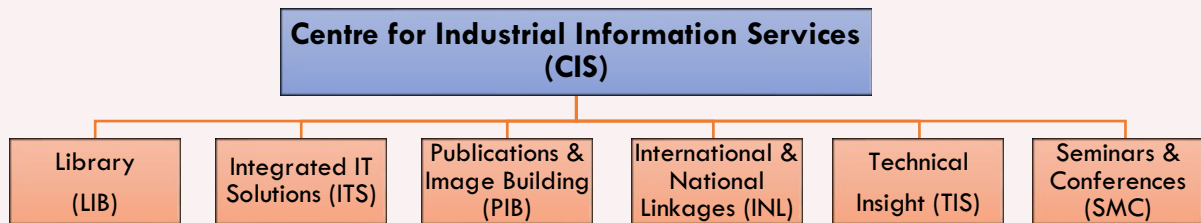
- To enhance quality, productivity and cost-effectiveness
- To improve the management of materials, energy and environmental resources
- To develop competency and productivity in human resources
- To develop technologies for durable infrastructure and affordable housing

Schemes of Govt. of India	NCB's activities	
	<p>Commitment to become Net Zero by 2070, reduction of CO<sub>2</sub> intensity by 45% by 2030 and reduction of 1 billion tonnes of CO<sub>2</sub> emissions by 2030</p>	<p>NCB's <b>Centre for Cement Research and Independent Testing (CRT)</b> has undertaken extensive research for Clinker Substitution to achieve specific CO<sub>2</sub> emissions to 0.35 tCO<sub>2</sub>/t of cement by development of:</p> <ul style="list-style-type: none"> <li>• Portland Composite Cement based on fly ash and Limestone</li> <li>• Portland Limestone Cement</li> <li>• Portland Dolomite Cement</li> <li>• Composite Cement based on fly ash and slag</li> <li>• Multi component blended cement</li> <li>• Geopolymer Cement</li> <li>• Low Carbon Clinker</li> </ul>
	<p>Make in India</p>	<p>To promote "Atma Nirbhar Bharat" and "Make in India" programmes by reducing the import of foreign Standard Reference Materials, NCB's Centre for Quality Management, Standards &amp; Calibration Services (CQC) developed 18 Bhartiya Nirdeshak Dravya (BNDs) for cement and cementitious materials.</p> <p>CQC provides Proficiency Testing services as well as Calibration services traceable to National / International Standards in various fields of force, temperature, mass &amp; volume, dimension, pressure and RPM.</p>
	<p>Pradhan Mantri Kaushal Vikas Yojana (PMKVY)</p>	<p>NCB's <b>Centre for Continuing Education (CCE)</b> has been organizing various industry-oriented training programmes for professionals of all levels &amp; students and Seminars / Workshops / Online Training/Webinars for cement, concrete, construction and building material sectors.</p> <p><b>Beneficiaries:</b> Entire Cement Industry, Integrated Irrigation Project for Climate Resilient Agriculture-Odisha, Power grid corporation Ltd., ISRO, IAF, RBI, BRO, Indian Post, Indian Railways, CPWD, PWD &amp; Water Resources Department of various State Governments, BPCL, HPCL, IOCL, DMRC, NBCC India Ltd., NHPC Ltd., NTPC, GAIL India Ltd. etc.</p>
	<p>PAT Scheme of BEE under National Mission for Enhanced Energy Efficiency (NMEEE)</p>	<p>NCB's <b>Centre for Mining, Environment, Plant Engineering &amp; Operation (CME)</b> has carried out over 200 Energy Audits of cement plants for improving Energy Efficiency under the <b>Perform Achieve &amp; Trade (PAT)</b> scheme of Bureau of Energy Efficiency (BEE), Ministry of Power, Govt. of India.</p> <p>CME is also carrying out research on ways to maximize <b>Waste Heat Recovery</b> and utilize <b>Renewable Energy</b> in cement related operations</p>
	<p>Transition to Circular Economy from Linear Economy</p>	<p>NITI Aayog has taken the lead to expedite the transition of the country from a linear to a circular economy and identified 11 focus areas including Municipal Solid Waste &amp; Liquid Waste, Electronic Waste, Scrap Metal (Ferrous &amp; Non-Ferrous), Solar Panels, Gypsum, Lithium-Ion Batteries, Agriculture Waste, Toxic Hazardous Industrial Waste, Used Oil Waste, Tyre and Rubber Recycling and End-of-life Vehicles (ELVs). Each of the focus areas is assigned to the concerned line Ministry.</p> <p>NCB has done extensive research on Gypsum under the aegis of DPIIT and Construction &amp; Demolition (C&amp;D) waste under the aegis of Ministry of Housing &amp; Urban Affairs (MoHUA) and organized stakeholder consultations, formulated comprehensive action plans and prepared report compiling all the recommendations from various stakeholders for submission to NITI Aayog.</p>
	<p>Swachh Bharat Mission</p>	<p>NCB's <b>Centre for Construction Development &amp; Research (CDR)</b> has done extensive research on utilization of C&amp;D waste as well as other industrial waste such as iron slag, copper slag, bottom ash, ferrochrome slag etc. as an alternative to natural fine and coarse aggregates; utilization of sintered flyash as coarse aggregates in structural light weight concrete and development of Geopolymer Cement and Concrete systems;</p> <p>NCB's <b>CRT &amp; CME</b> are actively working with cement industry for utilization of various wastes as Alternative Fuels and Raw Materials to enhance %TSR from 6% to 25%.</p>
	<p>Smart Cities Mission</p>	<p>NCB's <b>Centre for Construction Development &amp; Research (CDR)</b> has undertaken research projects such as <b>High Strength Concrete &amp; Ultra High Performance Concrete</b> and is providing reliable technical services to ensure durable and sustainable infrastructure by undertaking <b>Third Party Quality Assurance and Audit of Construction Projects</b> such as Convention Centres, Buildings, Bridges, Tunnels, Roads etc.</p> <p><b>Beneficiaries:</b> Housing &amp; Urban Development Dept., Odisha Bridge Construction Corporation, Odisha Works Dept., NBCC, CPWD, PWD, IDCO Odisha, Telangana, Power Grid Corp. Ltd., ITPO (Pragati Maidan), International Convention Centre Dwarka, Ambedkar Memorial, NTPC, AIIMS, MCD, DDA etc.</p>

# CENTRE FOR INDUSTRIAL INFORMATION SERVICES (CIS)

Centre for Industrial Information Services (CIS) is at the forefront in various activities like organising National Workshops, International Conferences, Institutional events, publications and printing. CIS collects and disseminates information to cement, building materials and construction industries. Besides other facilities, the Centre includes a modern library and a computer centre.

The Centre pursued its activities through six programmes viz.



## LIBRARY

NCB Library at Ballabgarh Unit serves as the national information centre for cement, building materials and construction industries. The holdings of the library have grown to 46,970 documents. The library has a bibliographic data base consisting of about 44,260 entries derived from the journals received. NCB scientists as well as cement plants and other user industries utilize it for interactive searches. A library automation system called 'LIBSYS' has been installed. The system is user-friendly and compatible to network communication.



## INTEGRATED IT SOLUTIONS

There are number of IT services offered by the CIS that connect our NCB's business and help it operate with integrity and maximum efficiency. Many of these technology services help employees to perform their duties on the job or to interact with others. Some common types of access services are E-mail services. Technical teams are also responsible for maintaining hardware and upgrading computers, modems or routers to support productivity and performance, hardware installations and maintenance, internet bandwidth management, maintaining anti-virus software. Teams that offer these services often guide users through the process of resolving technical errors or recommend further steps to take, such as sending the IT equipment for repairs. Technical service support is provided remotely to site users, online/offline webinars, workshops and international conferences. Maintaining the NCB Intranet services through internal forms and formats for regular internal use.

The website, [www.ncbindia.com](http://www.ncbindia.com) was uploaded with promotional information about NCB's activities done from time-to-time catering the following services :

- Revamping of NCB website as per the GIGW compliance, E- request forms for our internal organizational IT Services (E- request forms available on our Intranet platform)
- Maintaining the contacts database of different sections of cement industry, academia's and machinery suppliers, etc.
- Organisation of 17<sup>th</sup> NCB International Conference, Training Courses and quality related schemes. Further, workshops and webinars have been organized in the areas of Total Quality Management (TQM), Low Carbon Cements and Carbon Capture & Utilization and Renewable Energy.
- Uploading of employment updates, RTI related documents and other uploading requests received from various Centre's / departments time to time.
- Maintenance of hardware and software for whole of the institute.
- Efforts are being made for implementation of e Office in the institute, a Mission Mode Project (MMP) under the National e- Governance Programme of the Government of India.
- Bulk e-mailing services was continued for promotional information of 17<sup>th</sup> NCB International Conference on Cement, Concrete and Building Materials, held on 06-09th December 2022 at Manekshaw Centre, New Delhi.
- Use of social media platform for uploading latest information & activities of the institute.

## Followings are the webinars & workshops were organized using IT services

### Webinar on “Carbon Capture & Utilization and Renewable Energy”

NCB organized a webinar “Carbon Capture & Utilization and Renewable Energy” on the occasion of World Environment Day 2021 on 05<sup>th</sup> June 2021. The webinar was attended by total 546 participants from Cement Industry, Scientists / Engineers, Academic Institutions, Research Organisations / Government Deptt. / Companies. Overwhelming response received from the participants on the informative content of the webinar

### Webinar on “Total Quality Management”

NCB organized a webinar on “Total Quality Management” under the leadership of Dr Bibekananda Mohapatra, Director General, National Council for Cement & Building Materials on 27<sup>th</sup> August 2021. The webinar was attended by 375 professionals from all the major Indian Cement Companies.

### Webinar on NCB Methodology for Development of Plant Specific Secondary Standards for Calibration of XRF

NCB organized a webinar “NCB Methodology for Development of Plant Specific Secondary Standards for Calibration of XRF” on 13<sup>th</sup> September 2021 on 13<sup>th</sup> September 2021, under the Leadership of Dr. Bibekananda Mohapatra, DG-NCB. Total 568 participants from all the major Indian Cement Companies attended the webinar. The webinar was dedicated for Professionals of all levels of Indian Cement Industry which highlighted “NCB methodology for Development of Secondary Standards of all the materials in cement industry”. All plant operations starting from mining to cement grinding, are dependent on XRF analysis. Therefore, accuracy of XRF is very crucial for process as well as product quality control. Accuracy of XRF pivot on the standards used for calibration.

### Webinar on “Futuristic Low Carbon Cements: A Step Towards Decarbonization of Cement Industry”

NCB & IIT-Delhi jointly organized a webinar “Futuristic Low Carbon Cements: A Step Towards Decarbonization of Cement Industry” on 22nd October 2021. The webinar was attended by 286 professionals from all the major Indian Cement Companies. The webinar was inaugurated by DG-NCB along with Dr. S K Chaturvedi, Joint Director & Head-Cement Research & Independent testing & Dr. Shashank Bishnoi, Professor (Civil Engineering Department) IIT-Delhi.

Webinar highlighted new technologies in the area of low carbon cement developed by NCB and IIT-Delhi with the objective of Decarbonising the Indian cement industry.

### National Workshop on Low Carbon Cements

NCCBM organized a National Workshop on “Low Carbon Cement: NCB Initiatives” on 20<sup>th</sup> April 2022 at NCB Ballabgarh. The workshop was organized in the backdrop of Hon'ble Prime Minister Shri Narendra Modi's commitment for India to become Net Zero by 2070 at Glasgow in the COP26 Summit.

The workshop was inaugurated by Shri C Kamraj, IAS, Managing Director- TANCEM; Dr. S S Gupta, Sr. Development Officer-DPIIT, MoCI, GoI, Shri Neeraj Sinha, Sr. Advisor, Science and Technology, NITI Aayog, DG-NCB and Dr. S K Chaturvedi, Joint Director-NCB.



## CENTRE FOR INDUSTRIAL INFORMATION SERVICES (CIS)

It was attended by about 200 participants including senior officials from major cement companies of India like UltraTech Cement Ltd, Dalmia Cement (B) Ltd, Nuvoco Vistas Corp Ltd., J K Cement Ltd., J K Lakshmi Cement Ltd., Prism Johnson Ltd., JSW Cements, Ambuja Cements, ACC Ltd., Star Cement, India Cement; experts from DPIIT, NITI Aayog, BIS, BEE and PG Diploma students of Cement Technology course. It was attended by about 200 participants including senior officials from major cement companies of India like UltraTech Cement Ltd, Dalmia Cement (B) Ltd, Nuvoco Vistas Corp Ltd., J K Cement Ltd., J K Lakshmi Cement Ltd., Prism Johnson Ltd., JSW Cements, Ambuja Cements, ACC Ltd., Star Cement, India Cement; experts from DPIIT, NITI Aayog, BIS, BEE and PG Diploma students of Cement Technology course.

### PUBLICATIONS & IMAGE BUILDING

#### Publications:

Information on technologies and services of NCB is disseminated through NCB Publications regularly. Efforts to widely popularize and promote NCB activities, technology and consultancy services amongst the cement and related building materials industries were continued.

The following publications were designed and printed during the year 2021-22:

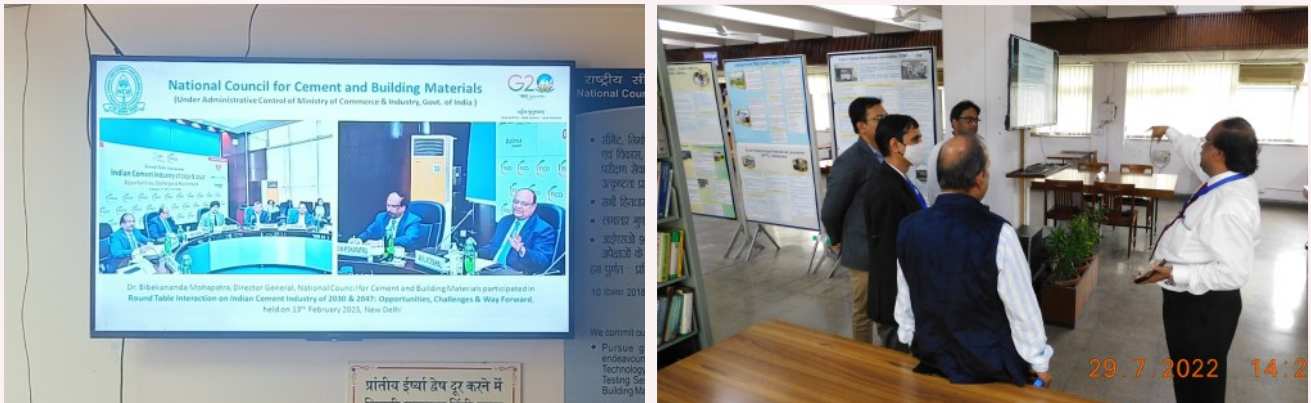
- Conference Proceedings
- Compendium titled “The Cement Industry-India 2022”
- Alternate Fuels – A Green Solution for Indian Cement Industry
- Guide Norms for the Cement Industry
- NCB Annual Report 2021-22 in English and Hindi versions separately
- Special Newsletter
- Hindi Darpan
- Report on Achieving Circular Economy in Gypsum
- NCB Centre Brochure
- Other materials related to 17<sup>th</sup> NCB International Conference like Bulletin, Flyer, Notepad, etc.



## Image Building (IMB):

Image Building Programme carries out dissemination of important institutional initiatives and achievements to the masses in general, and industry in particular through print and electronic media and advertisements in press, trade journals, periodicals, souvenirs, etc. The in-house publication “NCB Newsletter and Special Newsletter” is also used as an information carrier of NCB activities to the industry.

CIS also carries out photography activities and these photographs are further used in enhancing the content of quarterly newsletter, annual report, displayed on TV areas of the NCB as well as uploading on social platform like twitter and Facebook. Further, preparation and release of advertisement related to PG Diploma Course and Employment is carried out through Directorate of Advertising & Visual Publicity (DAVP) in press, trade journals, periodicals, souvenirs, etc.



**Image Building exercise implemented by displaying latest activities of the organisation on TV areas. Photography activities covering important meetings, visits and institutional events, etc.**

## International and National Linkages

NCB has been actively interacting and liaising with a number of international bodies and exchanging knowledge and experiences particularly in the area of cement and building materials industries.



**Delegation from the Embassy of Republic of Congo visited NCB Ballabgarh on 29 September 2022**

**Memberships of Indian and Overseas professional institutions, as listed below were served.**

MEMBERSHIP	
Indian	Overseas
Indian Roads Congress (IRC), New Delhi	Precast / Pre-stressed Concrete Institute (PCI), USA

**MoUs signed by NCB during the year 2021-22 :**

- |   |   |
|---|---|
| <ol style="list-style-type: none"> <li>1. Livsense Technologies Pvt. Ltd, Bengaluru, Karnataka</li> <li>2. Ravenshaw University, Cuttack</li> <li>3. Sambalpur University, Burla, Sambalpur</li> <li>4. Kalinga Institute of Industrial Technology (KIIT), Bhubaneswar</li> <li>5. Madhav Institute of Technology and Science, Gwalior</li> </ol> | <ol style="list-style-type: none"> <li>6. GLA University, Mathura</li> <li>7. National Institute of Technology, Andhra Pradesh</li> <li>8. Birla Institute of Technology and Science, Pilani</li> <li>9. Quality Council of India, New Delhi</li> </ol> |
|---|---|



**NCB signed an MoU with KIIT Deemed to be University (KIIT-DU)**



**NCB signed an MoU with Ravenshaw University (RU)**

**NCB signed an MoU with Sambalpur University (SU)**



**NCB signed MoU with Dean Research DRIC, IIT Roorkee**

**NCB signed MoU with National Productivity Council**



## TECHNICAL INSIGHT

NCB has been actively interacting and disseminating information with a number of stakeholders and exchanging knowledge and experience particularly in the area of cement and building materials industries. The continued interest of participants in the areas of alternate fuels and raw materials, climate change, net zero carbon emissions, high performance concrete, nano-technology etc., has led us through to give technical insights for efficient operation of cement plants, making of concrete and other construction activities. One of such technical insight on “Repair Materials & Methodology” was delivered by Dr Sanjay Mundra, Member Expertise Group, “Low Carbon Cement (LCC)” was delivered by Shri S K Agarwal, Expertise Group Leader-LCC.

## SEMINARS & CONFERENCES

NCB has been organizing International Seminars on Cement and Building materials every alternate year since 1987. These Seminars have emerged as singular biennial events in this part of the globe where experts of cement and concrete sector, policy makers, engineers and scientists, academicians / students, consultants, professionals and machinery manufacturers come under one roof and discuss future action plans aimed towards clean and green production and responsible consumption of the resources utilized in cement sector to ensure long term sustainability. Cement and Construction industries of the world look forward for participation in the Seminar/Conference.

NCB has organized 17 editions of international Conferences/Seminars so far on cement, concrete and building materials to provide a platform where the experts from the industry, research institutes, regulatory bodies, academia etc. share their knowledge and experiences for the good of the industry as well as society.

The 17<sup>th</sup> NCB International Conference on cement, concrete & building materials saw participation of around 1100 delegates including 48 overseas participants from 11 countries. During the span of the 4-day event, 160 presentations were made in 20 technical sessions; 4 panel discussions were held, covering key topics of concerns for the industry, and speeches were delivered by keynote speakers.

With an underlying theme of Moving Towards Net Zero Carbon Emissions four day 17<sup>th</sup> NCB International Conference inaugurated on 6<sup>th</sup> Dec 2022 by Shri Anurag Jain, Secretary, Department for promotion of Industry and internal trade (DPIIT) at prestigious Manekshaw centre and released the 4 Nos. NCB Publications.

### Release of Publications during 17<sup>th</sup> NCB International Conference

1. Conference Proceedings with Abstracts of 150 Technical papers and Background of Panel Discussions and Special Technical Sessions
2. 3<sup>rd</sup> edition of the compendium titled “The Cement Industry-India 2022
3. AFR Book Titled “Alternate Fuels – A Green Solution for Indian Cement Industry
4. 6<sup>th</sup> Edition of “Guide Norms for the Cement Industry



*Glimpses of 17<sup>th</sup> International Conference on Cement, Concrete and Building Materials*

## CENTRE FOR INDUSTRIAL INFORMATION SERVICES (CIS)



*CIS team along with other team members during the 17<sup>th</sup> NCB International Conference*



*Coverage of 4 Panel Discussions, 4 Special Technical Sessions and 20 Technical Sessions were also managed by CIS. These coverage were shared with the different sections of cement industry, media partners and on other platforms.*

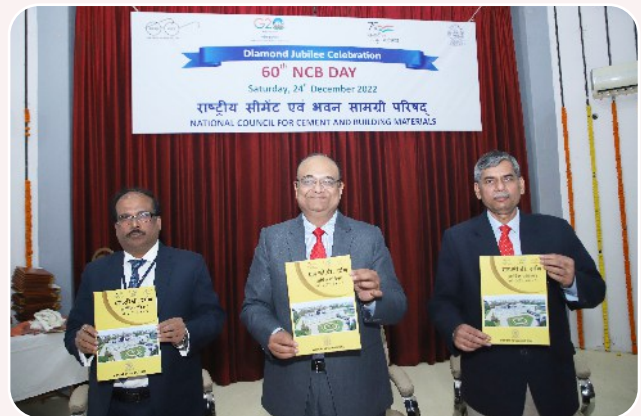


**Group Photo of NCB Officials during the 17<sup>th</sup> NCB International Conference**

## GLIMPSES OF 60<sup>th</sup> NCB DAY

National Council for Cement and Building Materials (NCB) was founded on 24<sup>th</sup> December 1962 with the objective to promote research and scientific work, connected with cement and building materials trade and industry. Padmashri Dr. H C Visvesvaraya, a reputed engineer par-excellence was invited to organize and took over the leadership of NCB, the then Cement Research Institute of India (CRI) in 1966. Soon thereafter, required land was acquired in Ballabgarh and the organizational work began under the pragmatic and visionary leadership of Dr. Visvesvaraya. The then President of India Hon'ble Shri V. V. Giri laid the foundation of the Ballabgarh unit on 25<sup>th</sup> March 1970.

Since its inception of NCB, CIS organized NCB Day every year. On 24<sup>th</sup> Dec 2022, 60<sup>th</sup> NCB day was celebrated by honouring Padmashri Dr. H C Visvesvaraya. NCB scientists, engineers, and staff and their families were highly privileged and look forward to his continued patronage and advice for the further development and growth of NCB, our society and the nation at large.





एक कदम स्वच्छता की ओर



ONE EARTH • ONE FAMILY • ONE FUTURE



**FOR FURTHER DETAILS, PLEASE CONTACT**

**HEAD OF CENTRE**

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