



Second Party Opinion

SECOND PARTY OPINION

JSW CEMENT LIMITED

SUSTAINABILITY-LINKED LOAN

Prepared by: DNV Business Assurance India Private Limited

Location: Bengaluru, India

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Disclaimer

Our assessment relies on the premise that the data and information provided by JSW Cement Limited to us as part of our review procedures have been provided in good faith. Because of the selected nature (sampling) and other inherent limitation of both procedures and systems of internal control, there remains the unavoidable risk that errors or irregularities, possibly significant, may not have been detected. Limited depth of evidence gathering including inquiry and analytical procedures and limited sampling at lower levels in the organization were applied as per scope of work. DNV expressly disclaims any liability or co-responsibility for any decision a person or an entity may make based on this Statement.

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DNV applies its own management standards and compliance policies for quality control, in accordance with ISO/IEC 17021:2011 - Conformity Assessment Requirements for bodies providing audit and certification of management systems, and accordingly maintains a comprehensive system of quality control, including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements. We have complied with the DNV Code of Conduct¹ during the assessment and maintain independence where required by relevant ethical requirements. This engagement work was carried out by an independent team of sustainability assurance professionals. DNV was not involved in the preparation of statements or data included in the SLL except for this Statement. DNV maintains complete impartiality toward stakeholders interviewed during the assessment process.

¹ DNV Code of Conduct is available from DNV website (www.dnvgl.com)

JSW CEMENT LIMITED

SUSTAINABILITY - LINKED LOAN FRAMEWORK

PRE-ISSUANCE 2ND PARTY OPINION BY DNV

Scope and objectives

DNV Business Assurance India Private Limited, India (henceforth referred to as "DNV") has been commissioned by JSW Cement Limited (henceforth referred to as "JSW Cement, "JSW" or "Borrower's" - (Corporate Identification Number: U26957MH2006PLC160839)) to provide a 2nd party opinion on JSW's Sustainability-Linked Loan Framework – April 2022 (the "Framework").

JSW Cement is India's one of the leading integrated Cement manufacturers and the flagship company of the JSW Group. JSW Cement is an unlisted company and headquartered in Mumbai, India. JSW Cement is considering entering into a corporate loan and would like to label the issuance as a "Sustainability-Linked Loan" ("SLL") as defined in the Sustainability-Linked Loan Principles 2022 ("SLLP") set forth by the Loan Markets Association ("LMA"), Asia-Pacific Loan Market Association ("APLMA") and Loan Syndications and Trading Association ("LSTA").

The Framework enables issuance of Sustainability-Linked Loan (referred to as "Sustainability-Linked Securities" or "Securities"), to finance general corporate purposes in JSW Cement, where entity commits to future sustainability improvements within a predefined timeline and has chosen to develop this Sustainability-Linked Loan Framework (the "Framework") to link its funding with organisations sustainability objectives and leverage ambitious timelines to achieve an improved sustainability performance that is relevant, core and material to both its business and the wider Cement sector they operate in.

JSW Cement has chosen to measure performance against the Sustainability Performance Target (SPT) through one Key Performance Indicator (KPI), Net CO₂ emissions intensity (from Scope 1 and 2), calculated as Kg CO₂ per tonne of cementitious material produced (Kg CO₂/tcm) covering its Scope 1 and Scope 2 emissions from the two integrated Cement plants and five grinding units as below, covering 100% of its current JSW Cement's production in India.

- Nandyal (Integrated Cement Plant) at Andhra Pradesh
- Dolvi (Grinding Unit) at Maharashtra.
- Salboni (Grinding Unit) at West Bengal.
- Vijaynagar (Grinding Unit) at Karnataka.
- Jajpur (Grinding Unit) at Odisha.
- Shiva (Integrated Cement Plant) at Odisha,
- Salem (Grinding Unit) at Tamil Nadu*

JSW Cement will assess its sustainability performance against SPT for the period FY 2020-21 to 2025-26, providing a target towards reducing the CO₂ emission intensity from its two integrated Cement plants and five grinding units in India by ≈15% by FY 2025-26 to a level equal or less than 223 kg CO₂/tcm, compared to FY 2020-21 CO₂ emission of 262 Kg CO₂/tcm taking account of direct (Scope 1) and energy indirect (Scope 2) emissions together.

**Since Salem was not operational in 2020-21, its emissions were not included in Baseline Calculation.*

DNV Business Assurance India Private Limited (“DNV”) has been commissioned by JSW Cement to review the SUSTAINABILITY-LINKED LOAN and provide a Second Party Opinion on the alignment of the SLL with the SLLP. Our methodology to achieve this is described under ‘Work Undertaken’ below. DNV did not provide assurance regarding the financial performance of the Loan, the value of any investments, or the long term environmental & social benefits of the transaction.

Our objective has been to provide an independent assessment on whether the Sustainability-Linked Securities to be issued under the Framework meet the criteria established on the basis set out below. The scope of this DNV opinion is limited to the Sustainability-Linked Loan Principles March 2022 (SLLP) set out by the Loan Market Association (LMA), Asia Pacific Loan Market Association (APLMA) and Loan Syndications and Trading Association (LSTA). Our methodology to achieve this is described under ‘Work Undertaken’.

Responsibilities of the Management of JSW Cement and DNV

The information and data used by DNV during the delivery of this review has been provided by JSW Cement and also sourced from publicly available sources that deemed appropriate. Our statement represents an independent opinion and is intended to inform JSW management and other interested stakeholders in the Securities as to whether the established criteria for the framework have been met, based on the information available with us. DNV is not responsible for any aspect of the nominated assets referred to in this opinion and cannot be held liable if estimates, findings, opinions, or conclusions are incorrect. Thus, DNV shall not be held liable if any of the information or data provided by JSW’s management and used as a basis for this assessment were not correct or complete.

Basis of DNV’s opinion

We have adapted our Sustainability-Linked Loan Principles methodology, which incorporates the five requirements of the SLLP, to create a JSW Cement-specific Sustainability-Linked Loan Assessment Protocol (henceforth referred to as “Protocol”). Our Protocol includes a set of suitable criteria that can be used to underpin DNV’s opinion. The overarching principle behind the criteria is that a Sustainability-Linked Loan should “provide an investment opportunity with transparent sustainability credentials”. As per our Protocol, the criteria against which the Framework has been reviewed are grouped under the five Principles:

- **Principle One: Selection of Key Performance Indicators (KPIs).** The Borrower of a sustainability-linked loan should clearly communicate its overall sustainability objectives, as set out in its sustainability strategy, and how these relate to its proposed SPTs. The KPI should be reliable, material to the Borrower’s core sustainability and business strategy, address relevant ESG challenges of the industry sector and be under management control.
- **Principle Two: Calibration of Sustainability Performance Targets (SPTs).** The SPTs should be ambitious, meaningful and realistic. The target setting should be done in good faith and based on a sustainability improvement in relation to a predetermined performance target benchmark.
- **Principle Three: Loan Characteristics.** The Loan will need to include a financial and/or structural impact depending on whether the selected KPIs reach (or not) the predefined SPTs. The loan documentation needs to require the definitions of the KPI(s) and SPT(s) and the potential variation of the SLL’s financial and/or structural characteristics. Any fallback mechanisms in case the SPTs cannot be calculated or observed in a satisfactory manner, should be explained.
- **Principle Four: Reporting.** Borrowers are encouraged to publish and keep readily available and easily accessible up to date information on the performance of the selected KPI(s), as well as a

verified statement/ report (see Principle 5) outlining the performance against the SPTs and the related impact and timing of such impact on the Loan's financial and/or structural characteristics, with such information to be provided to those institutions participating in this securities/ loan or to investors participating in the transactions at least once per annum.

- **Principle Five: Verification (Post-issuance).** The Borrower should have its performance against its SPTs independently verified by a qualified external reviewer with relevant expertise, at least once per annum. The verification of the performance against the SPTs should be made publicly available.

Work undertaken

Our work constituted a high-level review of the available information, based on the understanding that this information was provided to us by JSW Cement in good faith and is free from misstatements. We have not performed an audit or other tests to check the veracity of the information provided to us, however DNV has verified the scope 1 and 2 GHG emissions published as part of JSW Cements Sustainability Report -2020-21. The work undertaken to form our opinion included:

- Creation of a project-specific Protocol, adapted to the purpose of the evaluation of the Framework for proposed Securities, as described above and in Schedule 2 to this 2nd Party Opinion;
- Assessment of documentary evidence provided by JSW Cement on the Framework and supplemented by a high-level desktop research. These checks refer to current assessment of best practices and standards methodology;
- Discussions with JSW's management team and relevant functions/departments of JSW cement, review of relevant documentation including energy conservation/ GHG transition plan and review of historical implemented measures to improve the GHG emissions;
- Review of how the available CO₂ emission data and production volumes (cementitious material) for FY 2020-21 has been applied to derive JSW Cement's FY 2020-21 average CO₂ emission intensity;
- Review of how the available CO₂ emission data for FY 2020-21 and historical data for its operational entities - two integrated Cement plants – excluding mining activities' and 5grinding units in operations;
- Documentation of findings against each element of the criteria. Our opinion as detailed below is a summary of these findings.

Findings and DNV's opinion

DNV conducted the external review engagement in accordance with the Sustainability-Linked Loan Principles (SLLP). The review included i) checking whether the provisions of the SLLP are consistently and appropriately applied, and ii) the collection of evidence supporting the review. DNV's findings are listed below:

1. **Principle One: Selection of Key Performance Indicators (KPIs).** DNV confirms that JSW Cement's environmental sustainability KPI (CO₂ emissions intensity) is core, relevant, material and consistent with the company's overarching sustainability strategy. The rationale and process for KPI selection, as well as its definition, measurability and verifiability, are deemed to be robust, reliable and in accordance with the SLLP.
2. **Principle Two: Calibration of Sustainability Performance Targets (SPTs).** DNV concludes that the SPTs are meaningful and relevant in the context of JSW Cement's broader sustainability and business strategy and represent a material improvement over a predefined timeline. DNV concludes that JSW's target of a 15% reduction in carbon intensity compared to its FY 2020-21 baseline is ambitious and deemed to go beyond what is considered 'business-as-usual' considering ~50 % reduction achieved since FY 2014-15. DNV has discussed the credibility of JSW's approach to achieve

the SPTs by reviewing GHG reduction commitment and strategy and concludes that GHG reduction approach is viable and possible to meeting the SPT targets outlined in the Framework. DNV has also reviewed the credibility of JSW's strategy to achieve the SPT by reviewing CO₂ reduction planned activities and concludes that this macro level plan is viable and possible to meeting the SPT outlined in the Framework. In our opinion the proposed direct and indirect energy and GHG reduction i.e thru energy conservation and optimisation efforts will also contribute in advancing SDGs 7, 12 and 13.


- 3. Principle Three: Loan Characteristics.** DNV reviewed the disclosures related to Loan characteristics stated in the Framework and in our opinion the financial characteristics of securities to be issued under the Framework that could be impacted based on KPI performance under SPTs, are in line with the SLLP. This impact includes, but is not limited to, margin adjustment, coupon adjustment or re-payment amount adjustment etc. The specific loan/security documentation for an instrument issued under the Framework will determine relevant target observation dates for specified trigger events. The Framework may include appropriate fallback mechanisms as applicable.
- 4. Principle Four: Reporting.** DNV concludes that the Framework includes the required information on annual reporting of JSW Cement's GHG annual performance including strategy, management approach and measurement and monitoring mechanism including chosen standards for environmental and GHG reporting in its annual Sustainability Report Annual Reports and meets the requirement as outlined in the SLLP. JSW Cement confirms that JSW Cement's sustainability/integrated report will be published at an annual interval and made publicly available.
- 5. Principle Five: Verification.** DNV confirms that JSW Cement will have its performance against the SPT independently verified annually by an independent third party as part of its Sustainability/Integrated annual Report verification, and at a more frequent interval if required by the specific terms of loan under the Framework, i.e. as to be stated/ specified in the relevant documentation of the specific transaction (e.g. the Final Terms of the relevant Sustainability-Linked Loan).

On the basis of the information provided by JSW and JSW Cement and the work undertaken, it is DNV's opinion that JSW Cement's Sustainability-Linked Loan Framework meets the criteria established in the Protocol and that it is aligned with the stated definition of Sustainability-Linked Loan within the SLLP.

for DNV Business Assurance India Private Limited

Bengaluru, India / 09th September 2022

Vadakepatth Nandkumar
Lead Assessor



Mark Robinson
Technical Reviewer

About DNV

Driven by our purpose of safeguarding life, property and the environment, DNV enables organisations to advance the safety and sustainability of their business. Combining leading technical and operational expertise, risk methodology and in-depth industry knowledge, we empower our customers' decisions and actions with trust and confidence. We continuously invest in research and collaborative innovation to provide customers and society with operational and technological foresight. With our origins stretching back to 1864, our reach today is global. Operating in more than 100 countries, our 16,000 professionals are dedicated to helping customers make the world safer, smarter and greener.

SCHEDULE 1: DESCRIPTION OF JSW CEMENT'S KEY PERFORMANCE INDICATOR (KPI) AND SUSTAINABILITY PERFORMANCE TARGET (SPT)

KPI

CO₂ EMISSIONS INTENSITY, CALCULATED AS KILOGRAMS CO₂ PER TONNE OF CEMENTITIOUS MATERIAL PRODUCED (KG CO₂/TCM) (SCOPE 1 AND 2)

JSW Cement has chosen to measure performance through one KPI, i.e Total Scope 1 and Scope 2 CO₂ emissions intensity, calculated as kg CO₂ per tonne of cementitious material (kg CO₂/tcm).

The Scope 1 and Scope 2 GHG emissions are voluntarily verified for 2020-21, as part of JSW Cements Sustainability Report and being disclosed to CDP since 2018-19 on an annual basis. The reported emissions for 2020-21 were verified by DNV on a voluntary basis is publicly accessible to all stakeholders (<https://www.jswcement.in/sustainability>).

SPT

SPT: Net CO₂ emissions intensity reduction (from Scope 1 & Scope 2) to equal or less than 223 kg CO₂ per tonne of cementitious material (tcm), equivalent to a reduction of 15% by FY2025-26 from a FY2020-21 baseline of 262 kg CO₂ per tonne of cementitious material (tcm)

JSW Cement is committed in playing an important role in the transition to a low carbon economy. The company has developed a multi-prong plan on climate change mitigation and the sustainability linked securities are an important element to demonstrate its commitment to their sustainability strategy. JSW Cement's SPT is out in the framework are as follows:

	Observation date	Units	Base year: FY21	Target Year: FY26
SPT	31.03.2026	Kg CO ₂ /tcm	262	≤223

SCHEDULE 2: SUSTAINABILITY LINKED LOAN ELIGIBILITY ASSESSMENT PROTOCOL

1. Selection of Key Performance Indicators (KPIs)

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
1a	KPI – material to core sustainability and business strategy	<p>The Borrower’s sustainability performance is measured using sustainability KPIs that can be external or internal.</p> <p>The KPIs should be material to the Borrower’s core sustainability and business strategy and address relevant environmental, social and/or governance challenges of the industry sector and be under management’s control.</p> <p>The KPI should be of high strategic significance to the Borrower’s current and/ or future operations.</p> <p>It is recommended that Borrowers communicate clearly to investors the rationale and process according to which the KPI(s) have been selected and how the KPI(s) fit into their sustainability strategy.</p>	<p>Review of:</p> <ul style="list-style-type: none"> - JSW Cement - SLL Framework (13th April 2022) - JSW Cement Annual Report 2020 -21 - Sustainability Report of JSW Cement -2020-21 and GHG emissions Data reported in sustainability disclosures. - CDP Reports of JSW Cement - JSW Group’s Sustainability Vision (sustainability/ sustainability-about-us-overview - Environment Policy. - Commitment to climate Group’s initiatives –RE100, EP100, EV100 etc. (https://www.theclimategroup.org/our-work/news/indias-road-cop26-summit-mobilising-business-commitment-and-action-climate) - JSW Cement’s UN Energy Compact https://www.un.org/sites/un2.un.org/files/energy_compact_template_version_3_jsw_energy_30102021.pdf 	<p>DNV has reviewed chosen KPI (Net CO₂ emissions intensity (from Scope 1 & 2), calculated as kg CO₂ per tonne of cementitious material (kg CO₂/tcm)) and can confirm that the chosen KPI is material and relevant to the company’s core sustainability and business strategy for Cement making in Cement plant and grinding units.</p> <p>JSW cement has set out its environment/climate change policy and sustainability strategy focussing on reducing environmental footprint and more specifically on reducing GHG emissions in the production process. This is evidenced by JSW’s climate change policy, goals and targets, all being focused on emission reductions from its existing Cement Business activities towards a ~23% emissions intensity reduction by 2030 from the base year of 2020.</p> <p>This is clearly communicated in the Framework. The chosen KPI is outlined in more detail in Schedule 1, and entails:</p> <ul style="list-style-type: none"> • JSW Cement’s operations, measured in kilograms of CO₂/tonne of cementitious material produced (Kg. CO₂/tcm). <p>The metrics ((kg. CO₂/tcm) is a widely used metric in the Cement sector to monitor and report the annual GHG performance efficiency of a plant.</p> <p>The set CO₂ emissions intensity KPI is therefore of high strategic relevance for the Borrower now and for the foreseeable future to measure relative carbon intensity</p>

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
			<ul style="list-style-type: none"> - JSW’s Alignment to Global Framework Principles for Decarbonising Heavy Industry https://www.jswcement.in/pdf/Signed%20Document%20to%20GFP%20for%20Heavy%20Industry%2010-02-2021.pdf - JSW Sustainability Strategy, based on seven key elements - JSW and JSW Cement – Website https://www.jsw.in/groups/sustainability-homepage - Scope 1 and 2 emissions – Peer analysis - summary - JSW Corporate Policies on climate change, Energy, Resource conservation, Water etc. <p>Discussions with JSW Cement and JSW Corporate Sustainability and management team including Environment and GHG team.</p>	<p>reduction of its Cement making process and associated operations (grinding units). Further factors/elements which make up the KPI are under management control, JSW has adopted an operational control approach for consolidation of its GHG emissions in line with the accepted practice i.e. the Company has applied the World Business Council for Sustainable Development Cement Sustainability Initiative (‘WBCSD CSI’) Protocol Version 3 and the Internal Manual 3.1, 2020 created by Global Cement and Concrete Association (GCCA), to calculate its GHG Scope 1 and 2 emissions.</p> <p>Based on our own review including peer analysis of the Cement sector in India, the selected KPI is material, as carbon intensity impacts JSW Cement’s own value creation and is of interest to external stakeholders such as its customers who use Cement of various applications. Further, the Government of India is expecting corporates to proactively undertake measures to reduce GHG emissions and thereby bring in positive impact on climate change.</p> <p>DNV believes that the focus on deploying CO₂ emissions intensity reduction over time as a KPI will enable a targeted effort to deliver on JSW’s overarching decarbonisation targets. JSW Cement’s broader decarbonisation aims and facilitates the incorporation of tangible and transparent annual milestones that will facilitate measurable and transparent implementation of JSW’s broader environmental sustainability/ climate change policy and in our opinion the chosen carbon intensity KPI aligns with International Energy Agency (IEA), Net Zero Emissions (NZE) Scenario by 2050 for the global cement sector.</p> <p>We reviewed the following proposed actions related to energy conservation/ reduction plans:</p>

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
				<ul style="list-style-type: none"> • Increase Thermal Substitution Rate to 30% from current levels of 4.23%. • Electricity generation through enhanced Waste Heat Recovery Systems. • On-site renewable electricity generation to reduce the Scope 2 emissions. • Energy Efficiency measures through deployment of Best Available Technologies (BAT). <p>In terms of JSW's broader business strategy, DNV acknowledges that continual improvement including energy audits, technological upgradation including adoption of BAT, progressive enlarging use of renewable energy and other measures will help in reducing relative GHG emissions and will be a key driver of lowering operational costs for Cement making operations. As such, the carbon intensity KPI will also be instrumental to JSW Cement's performance beyond that of delivering on environmental sustainability targets.</p>
1b	KPI - Measurability	<p>KPIs should be measurable or quantifiable on a consistent methodological basis; externally verifiable; and able to be benchmarked, i.e. as much as possible using an external reference or definitions to facilitate the assessment of the SPT's level of ambition.</p> <p>Borrowers are encouraged, when possible, to select KPI(s) that they have already included in their previous annual reports, sustainability reports or other</p>	<p>Review of:</p> <ul style="list-style-type: none"> - JSW Cement - SLL Framework (13th April 2022) - JSW Cement Annual Report 2020 -21 - Sustainability Report of JSW Cement -2020-21 and GHG emissions Data reported in sustainability disclosures. - CDP Reports of JSW Cement - Scope 1 and 2 emissions – Peer analysis - summary - JSW Group's Sustainability Vision (sustainability/sustainability-about-us-overview 	<p>DNV concludes that the GHG KPI is measurable i.e. JSW Cement has adopted calculation methodology used for quantification of CO₂ emissions and follows GCCA Sustainability Guidelines (earlier referred to as "WBCSD CSI Protocol") for Scope 1 emissions and CO₂ Baseline Database for the Indian Power Sector for Scope 2 emissions, to determine its Scope 1 and Scope 2 GHG emissions in terms of kg CO₂/tcm on a consistent methodological basis, externally verifiable and able to be benchmarked to external references – sustainability disclosures. As part of our review we have reviewed the Peer review document JSW presented to DNV - Peer analysis report to validate the measurement methodology adopted by peers and GHG intensity of peers.</p>

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
		<p>non-financial reporting disclosures to allow investors to evaluate historical performance of the KPIs selected. In situations where the KPIs have not been previously disclosed, Borrowers should, to the extent possible, provide historical externally verified KPI values covering at least the previous 3 years.</p>	<ul style="list-style-type: none"> - Environment Policy. - JSW Sustainability Strategy, based on seven key elements JSW and JSW Cement – Website https://www.jsw.in/groups/sustainability-homepage - JSW Corporate Policies on climate change, Energy, Resource conservation, Water etc. <p>Discussions with JSW Cement’s management from Sustainability.</p>	<p>DNV concludes that the measurement methodology is a robust and reliable metric to measure carbon intensity for Cement making. The unit in terms of kg. CO₂/tcm is already an accepted Cement industry standard for reporting on carbon intensity.</p> <p>JSW Cement has been calculating/reporting its GHG values on an annual basis since FY 2018 as part of its CDP disclosures and plans to report its GHG emissions based on its bespoke data collection and gathering system based on fuel/energy consumption on an annual basis. JSW’s management team is committed to follow the established methodology on a consistent basis and will be subjected to externally verification on an annual basis. The KPI can therefore be benchmarked to external references of other Cement companies.</p> <p>We confirm that JSW Cement has provided GHG data since FY 2014-15; Review of GHG calculations for 2020-21, we confirm that JSW Cement has put in place a reliable and accurate system of GHG measurement and monitoring system; further, JSW’s management team confirmed to DNV that adequate resources have been allocated to ensure that the reported GHG performance data is factual, accurate and reliable. Sustainability and GHG data are also presented at various levels within JSW, including to the Board level sustainability committee on a regular basis and management team during our discussions have confirmed that JSW Cement will soon be disclosing to all stakeholders on a quarterly basis during its financial results declaration.</p>

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
1c	KPI – Clear definition	A clear definition of the KPI(s) should be provided and include the applicable scope or perimeter as well as the calculation methodology	<p>Review of:</p> <ul style="list-style-type: none"> - GHG calculations - Scope 1 and 2 emissions – Peer analysis - summary <p>Discussions with JSW Cement’s management team</p>	<p>DNV confirms that the KPI (CO₂ emissions intensity) chosen by JSW Cement provides a clear scope and calculation methodology. The KPI uses relevant parameters including material, fuel, process and energy consumption, and is reported in kg CO₂/tcm.</p> <p>This KPI is already an industry standard and widely reported on, as outlined in 1b.</p>

2. Calibration of Sustainability Performance Targets (SPTs)

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
2a	Target Setting - Meaningful	The SPTs should be ambitious, realistic and meaningful to the Borrower’s business and be consistent with the Borrowers’ overall strategic sustainability/ESG strategy	<p>Review of:</p> <ul style="list-style-type: none"> - JSW Cement - SLL Framework (13th April 2022) - JSW Cement Annual Report 2020 -21 - Sustainability Report of JSW Cement -2020-21 and GHG emissions Data reported in sustainability disclosures. - Commitments to RE100, EP100 and EV100 of The Climate Group, in one go. https://www.theclimategroup.org/our-work/news/indias-road-cop26-summit-mobilising-business-commitment-and-action-climate 	<p>DNV confirms that the SPT (Net CO₂ emissions intensity reduction (from Scope 1 & Scope 2) to equal or less than 223 kg CO₂ per tonne of cementitious material (tcm), equivalent to a reduction of 15% by FY2025-26 from a FY2020-21 baseline of 262 kg CO₂ per tonne of cementitious material (tcm)) is consistent with the Borrower’s overall strategic sustainability/ESG strategy, as it is fully aligned with one of JSW’s climate targets and supports the decarbonisation strategy of JSW.</p> <p>In our opinion the selected target is meaningful to the Borrower considering various challenges in the Cement business, as it addresses the environmental challenge for Cement making and JSW has already achieved considerable reduction in GHG – scope 1 and 2 over the years.</p> <p>After review of JSW Cement’s GHG reduction plan, discussion on strategy and management approach including commitments</p>

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
			<ul style="list-style-type: none"> - JSW Cement's UN Energy Compact https://www.un.org/sites/un2.un.org/files/energy_compact_template_version_3_jsw_energy_30102021.pdf - JSW's Alignment to Global Framework Principles for Decarbonising Heavy Industry https://www.jswcement.in/pdf/Signe d%20Document%20to%20GFP%20for%20Heavy%20Industry%2010-02-2021.pdf - CDP Reports of JSW Cement - Scope 1 and 2 emissions – Peer analysis - summary - JSW Corporate Policies on climate change, Energy, Resource conservation, Water etc. <p>Discussions with JSW's management and sustainability team</p>	<p>and targets set out by the JSW's board - DNV concludes that the SPT is specific, realistic, viable and achievable/ possible to meet as outlined in the Framework.</p> <p>JSW Cement has stated that its GHG intensity was 445 kg CO₂/tcm in FY 2014-15 and its most recently reported figure is 262 kg CO₂/tcm in FY 2020-21; JSW Cement is targeting a ~15% emissions intensity reduction by FY 2025-26 from FY 2020-21.</p> <p>A predetermined annual GHG reduction year-on-year, totalling a 15% GHG reduction by FY 2025-26 relative to a FY 2020-21 baseline, will build on carbon intensity reductions already achieved since FY 2014-15. In our opinion this will add impetus to JSW's environmental sustainability strategy implementation efforts.</p> <p>DNV notes that the ambition associated with the proposed level of performance for scope 1 and 2 is considering the fact that the global average scope 1 emissions of cement industry stand at 608 kg CO₂/ton of cementitious material in FY20². As per the ambitions of GCCA, these emissions have to reduce by 20% from the baseline of FY21 by 2030. This will amount to direct emissions of 486 kg CO₂/ton of cementitious material in 2030.</p> <p>Further in the national context where there is currently a impetus to use renewable energy and JSW is actively exploring various options of onsite and offsite green power generation and PPA's to supplement its energy demand and reduction of scope 2 emissions. Further during our discussion on target setting it was highlighted that JSW cement is one of the first company in the sector to have committed to all the three campaigns of RE100, EP100 and EV100 of "The Climate Group",</p>

² https://gccassociation.org/gnr/world/GNR-Indicator_71AGWct-world.html

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
				<p>Further JSW Cement has also signed the UN Energy Compact which are voluntary commitments of action, with specific targets and timelines to drive the progress on the achievement of SDG7, thus highlighting the next Decade Action Agenda to advance SDG7 on sustainable energy for all, in line with the goals of the Paris Agreement on Climate Change’ and signed the Global Framework Principles for Decarbonising Heavy Industry which provides clear steps to reduce emissions in heavy industries across the world, these commitments shall to strengthen economies and help limit global warming to 1.5°C.</p>
2b	Target Setting - Meaningful	SPTs should represent a material improvement in the respective KPIs and be beyond a “Business as Usual” trajectory; where possible be compared to a benchmark or an external reference and be determined on a predefined timeline, set before (or concurrently with) the issuance of the loan.	<p>Review of:</p> <ul style="list-style-type: none"> - JSW Cement - SLL Framework (13th April 2022) - Sustainability Report of JSW Cement -2020-21 and GHG emissions Data reported in sustainability disclosures. - CDP Reports of JSW Cement - Environment Policy. - Scope 1 and 2 emissions – Peer analysis - summary - JSW Corporate Policies on climate change, Energy, Resource conservation, Water etc. <p>Discussion with JSW cement management team</p>	<p>DNV confirms that the chosen SPT represents a material improvement of the KPI, being year-on-year reductions culminating in a 15% reduction in 2025-26 vs. 2020/21 baseline.</p> <p>The overall GHG reduction goes beyond “business as usual”, as JSW Cement will not achieve the set targets without the deployment of technical and other operational measures as detailed in the framework. The planned activities for GHG reduction highlight those improvements will be beyond what is considered the industry standard will have to occur to further reduce energy consumption in cement making process and can thus be deemed to go beyond what is considered ‘business-as-usual’.</p> <p>The set out SPTs are a direct reflection of the projected carbon/GHG management plan, the plan highlights the stepped-up incremental approach to GHG reduction over short, medium and long term i.e next 2 - 10 years. The targets were also reviewed considering the GHG footprint of Peers and JSW cements footprint is considered as one of lowest.</p>

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
2c	Target Setting – benchmarks	<p>The target setting exercise should be based on a combination of benchmarking approaches:</p> <ol style="list-style-type: none"> 1. The Borrower’s own performance over time for which a minimum of 3 years, where feasible, of measurement track record on the selected KPI(s) is recommended and when possible forward-looking guidance on the KPI 2. The SPTs relative positioning versus the Iss Borrower’s peers where comparable or available, or versus industry or sector standards 3. Systematic reference to science-based scenarios, or absolute levels (e.g. carbon budgets) or official country/regional/international targets or to recognised Best-Available-Technologies or other proxies 	<p>Review of:</p> <ul style="list-style-type: none"> - JSW Cement - SLL Framework (13th April 2022) - JSW Cement Annual Report 2020 -21 - Sustainability Report of JSW Cement -2020-21 and GHG emissions Data reported in sustainability disclosures. - CDP Reports of JSW Cement - Scope 1 and 2 emissions – Peer analysis - summary - JSW Corporate Policies on climate change, Energy, Resource conservation, Water etc. <p>Discussions with JSW Cement’s management team.</p>	<p>Based on our discussions and review of documents - DNV confirms that the SPT target setting exercise has been based on an appropriate combination of methodologies including benchmarking approaches:</p> <ol style="list-style-type: none"> 1.DNV confirms that the Framework provides a KPI performance track-record going back to FY 2014-15 and JSW has set out year-on-year guidance leading up to FY 2025-26. 2.DNV concludes that the SPT outlined goes beyond that of the industry standard as highlighted in Ref 2b. 3.Based on review of publically available information with respect to cement sector, DNV concludes that the SPT is put in an appropriate context of international target and national climate change mitigation efforts. The Framework highlights JSW’s ambition to “do what we can achieve the goals of the Paris targets”. Further JSW Cement has been consistently reducing its GHG footprint and achieved the lowest CO₂ emissions intensity footprint and management interactions confirm the intent to continue to remain as low GHG cement manufacturer by implementing the following initiatives: <ul style="list-style-type: none"> • Increase Thermal Substitution Rate to 30% from current levels of 4.23%. • Electricity generation through enhanced Waste Heat Recovery Systems. • On-site renewable electricity generation to reduce the Scope 2 emissions. • Energy Efficiency measures through deployment of Best Available Technologies (BAT).
2d	Target setting – disclosures	<p>Disclosures on target setting should make clear reference to:</p> <ol style="list-style-type: none"> 1. The timelines of target achievement, the trigger 	<p>Review of:</p> <ul style="list-style-type: none"> - CDP and sustainability Report - Objectives and targets - JSW Cement - SLL Framework 	<p>DNV confirms that the relevant disclosures on target setting are appropriately referenced:</p> <ol style="list-style-type: none"> 1. The timelines of SPT target achievement are clearly referred to, FY 2025-26. It is noted by DNV that the SPT may extend

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
		<p>event(s), and the frequency of SPTs</p> <ol style="list-style-type: none"> 2. Where relevant, the verified baseline or reference point selected for improvement of KPIs as well as the rationale for that baseline or reference point to be used 3. Where relevant, in what situations recalculations or pro-forma adjustments of baselines will take place 4. Where possible and taking into account competition and confidentiality considerations, how the Borrower intend to reach such SPTs. 	<ul style="list-style-type: none"> - JSW Cement environment Targets. <p>Discussions with JSW Cement’s management team and presentation on target setting</p>	<p>beyond the potential maturity dates and JSW will define the same in the Final Terms of the relevant Sustainability-Linked loan.</p> <ol style="list-style-type: none"> 2. The reference point for the SPT will be a baseline from FY 2020-21. The rationale for JSW Cement to use its overall FY 2020-21 GHG emissions is that it provides a clear reference point to compare against and the overall business is performing in normal manner. 3. Based on the review and discussion with JSW’s management team we are of the opinion that the JSW has carried out an interim risk assessment to identify the situations that could lead to a recalculations if any of the KPI baseline/trajectory, and JSW Cement plans to bring this out in the Final Terms of the relevant Sustainability-Linked Loan document. 4. The Framework provides sufficient information on how carbon emissions intensity reduction progress will be achieved, references how progress to date has been achieved and the likely measures to be implemented to meet the emissions intensity reduction trajectory outlined leading up to FY 2025-26. Based on our interactions with JSW - leading up to FY 2025-26, GHG reductions will be through various energy efficiency measures along with enhanced usage of renewables, BAT identification, evaluation and implementation with low-carbon intensity technology will drive GHG improvement, together with enhanced sourcing and use of renewable energy. <p>After review of JSW Cement’s overall policy strategy, management approach and decarbonisation plan, DNV concludes that the SPT is realistic and that the plan is viable and possible to meeting the SPT outlined in this Framework.</p>

3. Loan Characteristics

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
3a	Loan Characteristics – SPT Financial/structural impact	The Framework will need to include a financial and/or structural impact involving trigger event(s) based on whether the KPI(s) reach the predefined SPT(s) or not.	<p>Review of:</p> <p>JSW Cement - SLL Framework</p> <p>Discussions with JSW cement’s sustainability management.</p>	<p>JSW Cement has communicated to DNV the structure and function of the SLL mechanism with premium and discount thresholds for KPI/SPT. DNV concludes that this is in line with the requirements outlined by ICMA’s SLLP. Trigger events, with corresponding target observation date(s) and performance requirements under a specific SPT - as outlined in in the KPI and SPT document - will ensure that the financial characteristics of the loan changes in accordance with performance and are effective to drive performance for the entirety of the SLL term.</p> <p>JSW has informed that the extent of this impact will be outlined in the specific loan/security documentation. DNV did not carry out a review of an indicative load document/ Sheet to confirm if it fulfils the requirements of the SLLP regarding Loan Characteristics.</p> <p>Impacts to the interest rate in relation to this issuance are proposed and associated with the achievement of the SPTs as set out in the Loan Terms and conditions. This structure is considered to be typical within a Sustainability-Linked Loan instrument and appropriate for the format. DNV makes no assessment on the magnitude of the coupon adjustment.</p>

4. Reporting

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
4a	Reporting	<p>Borrower should publish, and keep readily available and easily accessible:</p> <ol style="list-style-type: none"> 1. Up-to-date information on the performance of the selected KPI(s), including baselines where relevant 2. A verification assurance report relative to the SPT outlining the performance against the SPTs and the related impact, and timing of such impact, on the loan’s financial and/or structural characteristics 3. Any information enabling investors to monitor the level of ambition of the SPTs <p>This reporting should be published regularly, at least annually, and in any case for any date/period relevant for assessing the SPT performance leading to a potential adjustment of the SLL’s financial and/or structural characteristics.</p>	<p>Review of:</p> <p>Review of:</p> <ul style="list-style-type: none"> - JSW Cement - SLL Framework (13th April 2022) - JSW Cement Annual Report 2020 -21 - Sustainability Report of JSW Cement -2020-21 and GHG emissions Data reported in sustainability disclosures. - CDP Reports of JSW Cement - JSW and JSW Cement – Website https://www.jsw.in/groups/sustainability-homepage - JSW Corporate Policies on climate change, Energy, Resource conservation, Water etc. <p>Discussions with JSW Cement’s management Team</p>	<p>DNV concludes based on the management discussion that JSW Cement’s existing GHG measurement and monitoring system including the articulations in this Framework and other policy/governance documents has required information including JSW Cement’s commitment to meet requirements of the SLLP. Further, JSW Cement is committed to disclose and publish its GHG emissions on an annual basis in its Sustainability/Integrated Report and CDP disclosures, and make available the GHG information publicly, including:</p> <ol style="list-style-type: none"> 1. KPI performance relative to the SPT targets will published annually based on GRI standards reporting requirements, as well as after an applicable target observation date making up a trigger event as outlined in the documentation of any specific loan issued under the Framework. The information will be made publicly available through the Sustainability/Integrated Report after year-end or the relevant target observation date. 2. JSW Cement’s performance relative to the outlined SPT will be subject to an annual verification from an independent reviewer and made public alongside JSW Cement’s Sustainability/Integrated report and disclosure to CDP 3. JSW Cement’s Sustainability/Integrated Report /CDP disclosures will provide updates on new or proposed regulations, including mandatory reporting relevant to monitoring the level of ambition of the SPT.

5. Verification

Ref.	Criteria	Requirements	Work Undertaken	DNV Findings
5a	External Verification	Borrower should have its performance against each SPT for each KPI independently verified by a qualified external reviewer with relevant expertise, at least once a year and for each SPT trigger event.	Review of: <ul style="list-style-type: none"> - JSW Cement - SLL Framework (13th April 2022) - JSW Cement Annual Report 2020 -21 - Sustainability Report of JSW Cement -2020-21 and GHG emissions Data reported in sustainability disclosures. - CDP Reports of JSW Cement. Discussions with JSW Cement’s Sustainability Team	DNV confirms that JSW Cement has committed in their Sustainability-Linked Loan Framework to obtain external and independent verification of its annual KPI performance relative to the SPT and in connection with any trigger event as specified in specific Loan/security documentation. The last Sustainability Report that includes non-financial disclosures including CO ₂ emission intensity have been externally reviewed and an assurance statement includes a review of Scope 1 and 2 GHG emissions.

About DNV

Driven by our purpose of safeguarding life, property and the environment, DNV enables organisations to advance the safety and sustainability of their business. Combining leading technical and operational expertise, risk methodology and in-depth industry knowledge, we empower our customers’ decisions and actions with trust and confidence. We continuously invest in research and collaborative innovation to provide customers and society with operational and technological foresight. With our origins stretching back to 1864, our reach today is global. Operating in more than 100 countries, our 16,000 professionals are dedicated to helping customers make the world safer, smarter and greener.