

## LANDSCAPE AND VISUAL EFFECTS ASSESSMENT - PEER REVIEW

RM20.280 – SMOOTH HILL LANDFILL

RESOURCE CONSENT APPLICATION TO DEVELOP AND OPERATE A LANDFILL AT SMOOTH HILL  
WITHIN THE DUNEDIN CITY DISTRICT OF THE OTAGO REGION

**Ben Espie (Landscape Planner)**

**vivian+espie**

**29<sup>th</sup> March 2022**

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### INTRODUCTION

- 1 The Dunedin City Council has applied for resource consents to develop and operate a new landfill at Big Stone Road, Smooth Hill, Dunedin. The proposal requires resource consents pursuant to both regional and district planning documents.
- 2 Appendix 12 of the resource consent application is a Landscape and Visual Assessment Report prepared by Boffa Miskell. That report was originally dated 17 August 2020 but was then updated to reflect amendments to the proposal. The updated Boffa Miskell report is dated 26 May 2021. This peer review report relates to the updated Boffa Miskell report. I shall refer to that updated report as **the BM Report**. The BM Report consists of the report itself as well as a graphic supplement.
- 3 I have been engaged by the Otago Regional Council to peer review the BM Report. I visited the site and surroundings with Rhys Girvan (of Boffa Miskell) on the 11<sup>th</sup> of March 2022 and am generally familiar with the area of Smooth Hill, Scroggs Hill and Saddle Hill. I understand that the Dunedin City Council have engaged Luke McKinlay to also peer review the BM Report.
- 4 Through reviewing the BM Report, all potential effects of the proposal on landscape and visual amenity have been considered. Full findings of an assessment are not set out in this report. This report gives review comments on the BM Report and discusses its methodology, completeness, plausibility, findings and conclusions. This report generally uses the headings of the BM Report as a structure to the review comments.

- 5 This report also gives comments on issues raised by public submissions that relate to effects on landscape character and visual amenity.

## **METHODOLOGY AND THE BOFFA MISKELL REPORT IN GENERAL**

- 6 The BM Report is very comprehensive and follows a clear structure. Its graphic supplement assists in understanding the report. However, as is expected, full clarity and understanding cannot be gained without a thorough visit to the site and its surrounding vicinity.
- 7 Appendix 1 of the BM Report sets out the assessment methodology that has been used in relation to visual effects, landscape effects and natural character effects. It is also noted (in Section 2.1.4) that the Te Tangi A Te Manu, Aotearoa New Zealand Landscape Assessment Guidelines<sup>1</sup> (**the NZILA Guidelines**) have been used.
- 8 Very largely, the methodology set out in Appendix 1 of the BM Report accords with the NZILA Guidelines. I note some minor discrepancies between the two but these are immaterial to the assessment of this proposal. Overall, I consider that a clear and appropriate methodology has been followed by the BM Report.

## **THE EXISTING ENVIRONMENT**

- 9 The existing environment is described by the BM Report in its Section 3. It is correctly noted that the subject site is well removed from any Outstanding Natural Landscape (**ONL**) or Significant Natural Landscape (**SNL**). The vicinity of the site is described as follows:
- 10 *“The surrounding environment represents an enclosed valley system supporting forestry, farmland, and lifestyle blocks. This typically maintains a remote working rural character dispersed throughout smooth undulating hill tops and gradually sloping gullies. Five dwellings are located within 2 km of the Site. Three dwellings are located to the south-east of the Site, namely, 513, 689 and 731 Big Stone Road and typically situated beyond intervening pine forest which restricts views towards the Site. ... The local roads in the area are predominantly single lane and unsealed, typically aligned to the undulating topography”<sup>2</sup>.*

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<sup>1</sup> Te Tangi A Te Manu, Aotearoa New Zealand Landscape Assessment Guidelines, April 2021, New Zealand Institute of Landscape Architecture.

<sup>2</sup> Boffa Miskell Ltd, Smooth Hill Landfill, Landscape, Natural Character and Visual Effects Assessment, Updated May 2021, Section 3.1.

- 11 The above represents a useful summary description of the relevant vicinity. In the field, it is apparent how much the character of the vicinity is defined by dynamic, ever-changing forestry activity, with forestry crops growing remarkably quickly.
- 12 The BM Report describes the site itself and includes Site Appraisal Photos A to C. It is noted that Big Stone Road, running along the southeastern edge of the site, generally represents a high point, with the sequence of gullies and spurs that define the site generally descending towards the north. As such, the site is centrally located and at the top of the line of rounded hills that run from the Taieri River in the south to Saddle Hill in the north.
- 13 The BM Report discusses the ephemeral streams and wetland on the subject site (that are not be altered) and wetlands adjacent to the parts of McLaren Gully Road that are to be upgraded. I note that specific ecological assessment forms part of the application.
- 14 Activities that are anticipated by the relevant planning documents are not described by the BM Report specifically under the heading of the existing environment, although they are mentioned when the relevant statutory provisions are discussed. In my understanding, a landfill operation on the subject site that accords with Designation D659 of the Dunedin Second Generation District Plan (**the 2GP**) is an anticipated activity that can be considered to be part of the existing environment.

## RELEVANT STATUTORY PROVISIONS

- 15 Section 5 of the BM Report sets out the statutory documents that are relevant to the consideration of landscape issues, being:
  - The RMA (Sections 6(a), 7(c) and 7(f));
  - The Partially Operative Otago Regional Policy Statement 2019 (**the Partially Operative RPS**);
  - The Regional Plan: Water for Otago;
  - The 2GP.

- 16 The BM Report does not mention the Proposed Otago Regional Policy Statement 2021 (**the Proposed RPS**). In my understanding, the Proposed RPS has been subject to submissions and further submissions but is yet to be heard. Therefore, limited weight can be placed on it.
- 17 The BM Report gives some commentary in relation to the documents set out above. I agree with that commentary, most relevantly:
- The site is not part of any ONL, SNL (pursuant to the 2GP), nor any Highly Valued Landscape (pursuant to the Partially Operative RPS<sup>3</sup>);
  - The site is not part of the coastal environment;
  - 2GP designation D659 includes a condition which requires that “*A landscape plan showing proposed initial planting, final landform, and final planting shall be prepared by the Requiring Authority under the direction of a qualified landscape architect prior to the commencement of landfilling operations. Development of the site shall be in accordance with this landscape plan*”.
  - A number of 2GP provisions apply to the proposed upgrades to McLaren Gully and Big Stone Roads. Provisions also give some guidance regarding the consideration of the landfill itself, although resource consent pursuant to these provisions is not being sought for the development and operation of the landfill; that will be addressed via an Outline Plan of Works in relation to designation D659.

## THE PROPOSED DEVELOPMENT

- 18 Section 5 of the BM Report describes the proposed development and its various stages and components. Further detail is given in the graphic supplement.
- 19 The changes to the landscape that the operation will bring will emerge incrementally over a long-term period. Final closure will occur after 40 years of operation. The BM Report usefully sets out

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<sup>3</sup> Highly valued natural features, landscapes and seascapes are defined by the Partially Operative RPS as those “*which have values that are of significance under Sections 6(a), 6(c), 7(c) and 7(f), but are not ‘outstanding natural features and landscapes’ under Section 6(b) of the RMA*”. The Partially Operative RPS does not go on to identify these areas, however, I note that the 2GP sets out that SNL landscapes are non-ONL landscapes that have values of high significance. The SNLs within the 2GP have been identified via a thorough assessment process that has included public input via submissions. I therefore consider that a landscape that is not identified as a SNL by the 2GP cannot be considered to be a Highly Valued Landscape pursuant to the Partially Operative RPS.

operational practices relating to scale, height and gradient of deposited material. The cross sections of the graphic supplement are useful illustrations.

- 20 Sections 5.2, 5.3 and Figure 8 (Landscape Mitigation Plan – Updated July 2021) set out the proposed vegetative treatment of the site to assist with mitigation of effects. This description is clear and can be further appreciated on site. The vegetated strips along Big Stone Road and the ongoing use of much of the site for forestry are key aspects of mitigation.

## **VISUAL CATCHMENT AND VIEWING AUDIENCE**

- 21 There is a discrepancy between the headings in the BM Report and its contents page, however Sections 5.1 and 5.2 (on pages 14 to 16) deal with visual catchment and viewing audience under the headings of Site Context Photographs and Visual Simulations.

- 22 As is stated in Section 5.3 (on page 13 of the BM Report);

*“The Site is visually confined within a sequence of hills and valleys which extend between the Taieri Plains and the South Taieri Coast. As such the visual catchment for all but the highest points of the Site are very restricted. Within this context, the potential to observe the proposed landfill operation is largely contained within an internal amphitheatre with the potential viewing audience limited to adjoining areas including parts of McLaren Gully and Big Stone Roads”.*

- 23 In subsequent paragraphs, the BM Report sets out that the Zone of Theoretical Visibility (**ZTV**) analysis given on Figure 6 of the graphic supplement does not take account of any vegetation in the landscape and is purely based on landform. As such, I consider that Figure 6 is of limited use. When considering visual effects, it must be accepted that the rounded line of hills that run south from Saddle Hill to the Taieri River (and further south as far as Kaitangata) are largely covered in commercial forestry that involves sequential growth and harvesting of forestry plantation trees at a large scale. Therefore, dynamic forestry activity significantly influences the ability for observers to see the subject site and any given stage or component of the proposed activities. This is borne out by subsequent sections of the BM Report including its photographs and photo-simulations. Realistically, the stretch of McLaren Gully and Big Stone Roads between Site Context Photos 1 and 5 defines the relevant visual catchment.

- 24 The BM Report provides visual simulations from four viewpoints. The chosen viewpoints are appropriate and represent the public viewpoints from which the most change will be visually

evident. Visual simulations are never a perfect surrogate for a real-world view taken in by the human eye, but for current purposes, I consider that the simulations are as accurate as is practicable.

- 25 Similarly, the three cross sections prepared in relation to the private properties of 513, 689 and 731 Big Stone Road helpfully depict relative elevations and view-lines but are somewhat schematic.

## **ASSESSMENT OF EFFECTS – LANDSCAPE EFFECTS**

- 26 The physical changes to the landscape that the proposal will bring are set out in Section 6.1 of the BM Report (and are described in detail in other documents that form part of the consent applications). The plan and cross sections of Figure 4 of the graphic supplement are useful in giving an overview of the fill that will ultimately result from the proposal. Most relevantly:

*“A mixture of existing plantation forestry and proposed mitigation and native planting will be established along Big Stone Road prior to the construction of the landfill (see Figure 5). By the time stage 3 – 4 begin (at approximately 11 – 12 years) the planting will have established to enable screening of the proposed fill.*

...

*The natural amphitheatre setting lends itself to staged landfill development, which will occur in four stages (Stages 1 to 4). Stage 1 will involve filling behind the toe buttress constructed at the northern base of the amphitheatre. Stages 2 to 4 will then progress in a clockwise fashion from northeast to west, filling over Stage 1 and buttressing into the surrounding gully.*

...

*The nature of landfill activities mean that the proposal will inevitably alter the existing landform within the Site. During operation the deposition of refuse will represent a raw worked appearance which gradually moves across the Site and contrasts with surrounding established pastoral and forestry land-use*

...

*As refuse is deposited during each stage of the landfill, activity will involve exposing areas of open ground prior to this being covered in accordance with daily and intermediate cover requirements as described in section 5.1.2*

*above. Such activity will encompass the operation of heavy machinery and result in a raw worked appearance generating engineered landforms which reinforce the transitional working nature of the Site”<sup>4</sup>*

- 27 The work that is proposed to upgrade McLaren Gully and Big Stone Roads is also described in Section 6.1.1 of the BM Report. A 7-metre-wide sealed formation is to be achieved and some cut batters of up to 4 metres will be evident. Batters are proposed to be scarified and hydroseeded where possible. In my understanding, only a relatively small area of these upgrade works will extend outside of the legal road corridor.
- 28 The proposed vegetative treatment within the site has been described elsewhere. Obviously, vegetation will change considerably in the footprint of the landfill, with forestry continuing around the periphery of the filled landform, including around the proposed stockpiles and facilities buildings.
- 29 From an examination of the application details and observation on site, the above descriptions appear accurate.
- 30 Regarding the landscape effects of the above-described landscape changes, the BM Report sets out a summary of its findings in its Section 6.1.5. I set out those findings and give my comments below:
- **Road upgrade:** The BM Report finds a moderate adverse landscape effect, reducing to low over time. The factors contributing to this effect relate to exposed cuts and fills that will be hydroseeded to re-grass. Soil conditions are such that complete re-grassing is unlikely and like the existing road formation, and others in the area, some areas of exposed clay soils are likely. I generally agree with the BM Report’s findings on this point but I find that the adverse effect would be better described as moderate-low in the short term rather than moderate. Primarily, this is because the majority of the road formation works are within the legal road corridor and therefore anticipated. A hypothetical road formation that remains entirely within the legal road corridor could have very similar effects to that which is proposed.

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<sup>4</sup> Boffa Miskell Ltd, Smooth Hill Landfill, Landscape, Natural Character and Visual Effects Assessment, Updated May 2021, Section 6.1, 6.1.1 and 6.1.2.

- **Landform effects:** The BM Report finds a moderate-high adverse landscape effect, reducing to low over time. The factors contributing to this effect relate to the significant landform changes and raw state within the site itself during the operational phase. I agree with this finding in that natural landform will be very significantly modified. This effect will be localised to the footprint of the works themselves, which sit within the designation area. The ultimate landform will appear congruent with surrounding topography.
- **Vegetation effects:** The BM Report finds a low adverse landscape effect during the operational phase, reducing to a neutral effect in the long term. The factors contributing to this effect relate to sizable dynamic changes to vegetation cover during the operational phase and then reinstatement at the time of retirement. I generally agree with the BM Report's findings on this point but I find that following retirement, the effect on vegetation would be better described as a low-degree positive effect rather than neutral. This is because of the bands of native vegetation (kanuka and totara) that will adjoin Big Stone Road and run through the site and the managed and expanded native wetland areas. These aspects of the proposal in conjunction with consent authority monitoring, will result in active management of the site's vegetation (which is not the case currently) and ultimately, improved native biodiversity.
- **Landscape character effects:** The BM Report finds a moderate-low adverse landscape effect during the operational phase, reducing to a low effect following retirement. The factors contributing to this effect relate to the rural-industrial nature of the activity within the site itself and the gradual filling and reinstatement. I agree with this finding, while the footprint of the proposed activity itself (including ancillary activities) will change markedly in terms of landscape character, this effect is contained, is within the designation area, and will sit in a broader area of non-ONL, non-SNL landscape that is defined by extensive dynamic forestry activity that includes periodic clear harvesting and the ongoing use of large machinery and vehicles.

31 Overall, in terms of landscape effects, the findings of the BM Report are plausible and have not omitted any significant considerations.



## **ASSESSMENT OF EFFECTS – NATURAL CHARACTER EFFECTS**

- 32 On the issue of natural character, the BM Report refers to the Ecological Impact Assessment Report that forms part of the application. This is appropriate; the consideration of natural character is not just a landscape consideration; it is an ecological (and sometimes geomorphological or hydrological) consideration. The BM Report notes the loss of 16.5m<sup>2</sup> of low-quality wetland adjacent to McLaren Road and the 0.49ha area of wetland planting and restoration within the subject site. I agree with the BM Report that this represents a net gain and a positive effect (of a low degree). The effects of this net gain in relation to ecology, water quality, etc. will be discussed by other experts.

## **ASSESSMENT OF EFFECTS – VISUAL EFFECTS**

- 33 The visual catchment and viewing audiences that are relevant to the proposal are discussed above. The BM Report then sets out findings regarding effects on views and visual amenity in its Appendix 2 and its Section 6.3.
- 34 As discussed in relation to visual catchment, in terms of the broader landscape, the site is particularly hidden. Essentially, it sits in a depression on the top of the rounded, forestry-covered hills that run between Saddle Hill and the Taieri River. Some very long-range views to the vicinity of the site are potentially available from distant elevated locations such as Saddle Hill (11km to the northeast) or Maungatua (15km to the northwest) but realistically, surrounding forestry and the distance of these views will mean that the proposed activity is indiscernible from viewpoints such as this. Potential visual effects are confined to immediately neighbouring land and the stretch of McLaren Gully and Big Stone Roads between Site Context Photos 1 and 5.
- 35 In relation to visual effects as experienced from roads, the BM Report describes these effects in detail in Section 6.3 and summarises them in Appendix 2. Following examination in the field, I agree with these descriptions, most relevantly:

*“Prior to the landfill becoming established, the most apparent visual change along McLaren Gully Road and Big Stone Road to the entrance to the Site will be the upgrade of the existing road from SH1. This will replace a gravel road with a two-lane sealed road which retains similar informal swales along the margins.*

...

*The contained visual context of the Site means the potential for adverse visual effects resulting from the proposed landfill are limited to adjacent areas. Once planting reaches approximately 2-3 m high (year 3-4), this will screen direct views into the Site from adjoining areas. During operation, once existing plantation trees reach 10m high (within the first 10 years of operation) these will provide additional screening of facilities on the ridge when approaching the Site from McLaren Gully Road to the east.*

...

*When approaching the Site from the east along McLaren Gully Road (VP1), the initial stages of the landfill under operation will predominantly be screened by the intervening spur which contains the site access and associated infrastructure on a central spur (VP1A). Once mitigation is established in approximately 10 years, views of infrastructure required to support the Proposed Development will become largely screened.*

...

*When approaching the Site from the west (VP2), the landfill will be visible from Big Stone Road, prior to mitigation becoming established (VP2A). During the initial stage of the landfill, the combination of intervening plantation forestry and boundary planting will increasingly become established and screen the western stockpile area and much of the lower lying internal operation in fleeting views (VP2B). Once mitigation is established, the combination of plantation forestry and enduring native vegetation along the boundary will ensure an effective long term visual screen (VP2CB) for the stockpile and roading.”*

- 36 VP1 as illustrated in the BM Report’s graphic supplement is the location on these roads that allows most visibility to the proposed activities. In the short term, internal road formation, a stockpile area and some infrastructural buildings will be evident. Incrementally, vegetation on site will partially screen these elements but some built form and parts of stockpiles will remain recognisable.
- 37 VP2 illustrates the visibility for an eastbound road user approaching the site. Again, internal road formation, some infrastructural built form and stockpiling/landfill will be evident. As vegetation on site begins to mature, the activities will become more visually enclosed but still recognisable. Ultimately, the roadside vegetation within the site will mean that views to the north and west from this part of Big Stone Road become significantly enclosed by vegetation (kanuka/totara). The same applies to VP3 and the general road frontage of the site to Big Stone Road; the road user’s experience will be one of considerable vegetative enclosure. This has also been the experience in the past prior to relatively recent forestry harvesting; such is the case in an area of cyclic forestry crops.

- 38 Ultimately, in relation to effects as experienced from McLaren Gully Road and Big Stone Road, the BM Report finds adverse visual effects that are moderate in the short term, reducing to low once mitigation is established. I agree with this finding and consider that a key factor is the form of visual amenity that can be expected in the status-quo situation; a form of amenity that includes ongoing extensive forestry including harvesting, associated vehicle movements, etc.
- 39 In relation to visual effects as experienced from neighbouring private locations, BM Report again describes these effects in detail in Section 6.3 and summarises them in Appendix 2. Properties at 731, 689 and 513 Big Stone Road are identified as being potentially affected. Sight-line cross sections from these properties to the subject site are shown on Figure 7 of the graphic supplement. These properties are between 15 and 30ha in area and are very largely covered in mature plantation forestry. They also each have a dwelling on them. Adjacent properties on the southeastern side of Big Stone Road are similarly covered in forestry but do not contain dwellings.
- 40 Assuming that the contour and cross-section information included in the BM Report is accurate, then there would be very minimal visibility to any of the proposed activities from any of the three dwellings on the abovementioned properties, even in the event that all forestry trees in the vicinity are removed. As has been discussed, the forestry crops in this vicinity are dynamic in terms of cyclic harvesting and planting. The dwellings on the three identified properties are located and oriented to take advantage of the very broad views to the east, out over the coast. Certainly, views are also available to the west towards Maungatua but these views are secondary to the primary views to the east. I consider that given the strong screening provided by forestry trees, the existence of Designation D659 and the general working forestry character of the area adjacent to, and north of Big Stone Road, the adverse effects on the visual amenity of these private properties will be of a low degree (as per the BM Report).
- 41 I also agree with the BM Report that when the occupiers of these properties exit their properties onto Big Stone Road, they will experience more pronounced visual effects. An observer of this sort currently has views over the cleared forestry land of the subject site. Until relatively recently, forestry trees would have blocked this view. If the proposed activities proceed, there will be some visibility to them, as set out in relation to effects as experienced from Big Stone Road above. However, in the medium to long term, native vegetation along the site's road frontage will screen that visibility, creating vegetative enclosure that is somewhat akin to the enclosure created by the recently-felled forestry trees on the site but of a native character.

42 The land to the immediate northeast of the subject site and on the northeastern side of McLaren Gully Road that slopes upward to the north, allows views across the site. This land is unoccupied grazing or forestry land. Observers who are periodically involved in work on these properties will be able to view the proposed activities. Again, over time, vegetation including on-site forestry will partially screen and visually soften the activities on the subject site and Designation D659 provides for landfill activity. Given the infrequent presence of these observers and the work they are engaged in, they are considerably less sensitive to visual effects than a resident.

43 Overall, the BM Report's summary regarding visual effects is plausible and agreeable:

*"The location and physical nature of the Site, within in a folded gully system, essentially contains and mitigates most visual effects of the landfill on the surrounding area. Views from dwellings are limited to long distance partial views and typically concealed by intervening plantation forest with a working rural landscape. Once perimeter planting is established, temporary views along the boundary of the landfill will become obscured generating low adverse visual effects"<sup>5</sup>.*

## RECOMMEDATIONS AND CONCLUSION

44 The recommendations of the BM Report describe the proposed mitigation that is to be provided by vegetation management and planting. This is also set out on the amended version of the Landscape Mitigation Plan that forms Figure 8 (dated July 2021) of the graphic supplement. I agree that the mitigation is appropriate and suitable conditions to enforce it should be placed on any resource consent that is granted.

45 The BM Report then summarises its conclusions. Subject to the comments given in this report, I agree with those conclusions. In an overall sense, I consider that the BM Report has followed an appropriate methodology and has not omitted any important considerations. I find it to be thorough and its findings to be plausible.

## SUBMISSIONS

46 Of the 283 submissions that have been received, very few mention landscape or visual effects. Those that do are commented on below.

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<sup>5</sup> Boffa Miskell Ltd, Smooth Hill Landfill, Landscape, Natural Character and Visual Effects Assessment, Updated May 2021, Section 6.3.1.

Submission 70 – Paula Lee Hasler with support of Cycling Otago Incorporated

- 47 This submission is largely concerned with recreational effects of the proposal; however, it also raises some concerns in relation to landscape. The submission cites some of Section 3.1.1 of the BM Report regarding the Taieri slopes and how that landscape unit is described in the Dunedin Landscape Management Area Review; “Collectively, the rural hillsides that surround the Taieri Plain were described as having inherent visual amenity, landscape and ecological values. They include iconic landmark features of citywide importance, founded on strong cultural associations”.
- 48 Certainly, the rural hillsides that surround the Taieri Plains have some landscape importance and include some significant features. Some ONL and SNL areas are identified by the 2GP in this regard. The site of the proposed activities is well separated from any ONL or SNL. It is not in an area that is given any elevated landscape protection (as some other areas are via ONL/SNL status) and is in a location that has been designated for landfill use. That is not to say that there are no adverse landscape and visual effects; there are some and these have been reported on by the BM Report.

Submissions 193 – Sally Tanner and Submission 208 – Ramsey Elizabeth Ashworth

- 49 These submissions are largely concerned with loss of habitat and vegetation and contamination of land and water, but they mention that the proposal will “spoil the area visually” and “will be an eyesore”.
- 50 I have reviewed the BM Report’s examination of visual effects and consider it to be plausible and accurate. The details of the proposed activity including its mitigation measures, combined with the details of the site including its topography and context, mean that adverse visual effects will be of a low degree overall.

## **OVERAL CONCLUSION OF THE PEER REVIEW**

- 51 As has been set out in this report, I consider that the BM Report is thorough, complete and plausible. Subject to my comments above, I very largely agree with its findings and conclusions.

**Ben Espie**

**vivian+espie**

**29<sup>th</sup> March 2022**